

Employing self-determination theory to examine the sport experiences of athletes who did and did not complete their collegiate athletic eligibility

By  
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Sidney A. Hirsch

Submitted to the graduate degree program in Health, Sport, and Exercise Sciences and the Graduate Faculty of the University of Kansas in partial fulfillment of the requirements for the degree of Master of Science.

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Chair: Mary D. Fry, PhD

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Member 2: Susan P. Harvey, PhD

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Member 3: Darrell Phillips, PhD, CSCS\*D

Date Defended: 16 May 2019

The thesis committee for Sidney A. Hirsch  
certifies that this is the approved version of the following thesis:

Employing self-determination theory to examine the sport experiences of athletes who did and  
did not complete their collegiate athletic eligibility

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Chair: Mary D. Fry, PhD

Date Approved: 16 May 2019

## Abstract

Little research examines why collegiate Division I student-athletes decide to end their sport careers early. If athletes who are intrinsically motivated are more likely to complete their college athletic eligibility, and athletes who complete their college athletic eligibility are more likely to graduate from college, it would follow that the NCAA would be invested in understanding how to foster intrinsic motivation among all their athletes. The purpose of this study was to examine athletes' sport experiences using SDT as a framework to consider their perceptions of the extent that they felt autonomy, competence, and relatedness during their sport experiences. The responses of athletes who completed their sport eligibility were contrasted with those who did not complete their eligibility. Pairs of athletes (N=18) were matched up by sport, year played, team, gender, and include one who completed eligibility and the other who did not. A qualitative design was employed whereby athletes were interviewed and a thematic analysis was conducted to examine overarching themes. Athletes who completed their collegiate eligibility were much more likely to have their BPN met than those who ended their collegiate careers prematurely. Results suggest that coaches should strive to meet the BPN of athletes to help them maximize their college sport careers.

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Employing self-determination theory to examine the sport experiences of athletes who did and did not complete their collegiate athletic eligibility

“[My coach] would lie and treat [me] like dirt and insult [me] and then two seconds later act like nothing was wrong. He didn’t communicate well. [...] It just wasn’t the setting I wanted to be [playing] in.”

–Former Division I Volleyball Player

The NCAA states that the ultimate goal of the college experience for student-athletes is graduation. They want athletes to have a good academic and sport experience, thrive as both students and athletes, and graduate. The NCAA recognizes the importance of student-athletes having positive sport experiences, yet many student-athletes drop out of their sport before their eligibility is complete.

In most cases, college athletes have a five-year clock to complete their four years of eligibility. Many finish their full amount of eligibility, while others decide to end their collegiate careers early. There are many factors that play into athletes’ deciding to end their career early, including financial reasons, coaching style, loss of passion, time commitment, injuries, burnout, academics, family, and more. While there are numerous reasons athletes might have for dropping out of a sport that they once loved, a key factor may be their motivation. In simplistic terms, motivation is the aspiration to do something. In more formal terms, motivation is defined as “the process that influences initiation, direction, magnitude, perseverance, continuation, and quality of goal-directed behavior” (Maehr & Zusho, 2009, p. 77). Maehr and Meyer (1997) suggest that it could be useful to think of motivation in terms of personal investment. Investment is “seen in the direction, intensity, persistence, and quality of what is done and expressed” (Maehr & Meyer, 1997, p. 373). Every individual has motivation, but it depends on why, how, when, and in what

circumstances individuals employ their “personal investment”. While some reasons athletes have for not completing their eligibility may be beyond their control (e.g., injury), decreased motivation is a factor that can be addressed. It is important to understand why athletes are not completing their full amount of collegiate eligibility and how the sport experience can be improved to foster an environment where athletes want to remain part of the team for the full length of time.

### *Self-Determination Theory*

One theory that describes how individuals’ motivation can be optimized is self-determination theory (SDT). Deci and Ryan developed SDT to explain how individuals can reach the highest level of intrinsic motivation. They offer a framework that provides an understanding of the influences that promote motivation and healthy psychological and behavioral performance (Ryan & Deci, 2000a). According to SDT, motivational regulations lie on a continuum ranging from amotivation to extrinsic motivation to intrinsic motivation. Amotivation is the complete lack of motivation to engage in a certain activity, whereas extrinsic motivation involves doing something for external reasons, such as money, verbal praise, applause, medals, trophies, and other awards. Intrinsic motivation involves participating in an activity for reasons that are personal to the participant, such as excitement, challenge, or a sense of accomplishment. The more intrinsically motivated athletes are, the more likely they will be to continue participating in their sport. Within extrinsic motivation, there are four separate levels, including external regulation, introjected regulation, identified regulation, and integrated regulation. External regulation is nearest to amotivation, and occurs when individuals are motivated primarily by external rewards and punishment. Introjected regulation is more ego-based and involves internal rewards and punishment that individuals place upon themselves. For

example, they may feel guilt for not doing an activity (e.g., off-season conditioning). Closer to intrinsic motivation is identified regulation, which involves individuals placing some personal importance in the reasons they play. The last of the extrinsic motivation levels is integrated regulation. This is the most autonomous form of extrinsic motivation, where athletes are consciously valuing their reasons for playing their sport and are participating in it for their own personal reasons (Ryan & Deci, 2000b). Deci and Ryan assert that intrinsic motivation is the most beneficial form of motivation for all individuals who are seeking to sustain motivation over time.

### *Basic Psychological Needs*

The closer athletes are on the continuum towards intrinsic motivation, the more likely they are to thrive as athletes. Deci and Ryan developed six sub-theories to their larger SDT, including basic psychological needs theory (BPN). The researchers formulated BPN to identify and describe the three basic psychological needs that individuals must have met to be intrinsically motivated. Specifically, these needs include autonomy, competence, and relatedness. Autonomy reflects the need of athletes to have some control over their actions and believe they regulate their own behaviors. An example of athletes feeling autonomy within their sport could be having a coach that is open to their input about practices. This can also be done by coaches asking for athletes to share their opinions and acknowledge their feelings rather than taking a dogmatic “in charge” approach. The need for competence suggests that individuals need to feel sufficient ability in their sport or activity. For example, athletes will be more likely to feel competent if they continue to improve in their sport, develop skills, and overall become more proficient. Third, relatedness represents the need to feel a sense of belonging to a group. When athletes feel like they belong on the team and have close friends on the team, this increases the

sense of relatedness they feel. SDT specifies that individuals will be more likely to engage in activities that satisfy these three needs and continue to be intrinsically motivated in the activity (Ryan & Deci, 2000a).

### *Cognitive Evaluation Theory*

While BPN describes the three primary needs all athletes must have to thrive, Cognitive Evaluation Theory (CET) outlines how individuals such as coaches can help athletes move to the right of the continuum and experience more self-determined behavior. SDT is comprised of six sub theories, each explaining a motivationally based occurrence. CET addresses variability in intrinsic motivation due to specific social and environmental factors (Ryan & Deci, 2000a). The theory argues that circumstantial events, such as feedback, rewards, communication, can enhance intrinsic motivation by increasing feelings of competence. CET specifies that it may depend on the circumstance whether the need for competence is met and if intrinsic motivation is increased. For example, feedback given by a coach can help augment the need for competence, but if it is negative performance feedback rather than positive performance feedback, intrinsic motivation could be diminished. CET also explains that feelings of competence will not increase the levels of intrinsic motivation unless accompanied by a sense of autonomy. Tangible rewards, threats, deadlines, pressured evaluations, and imposed goals are a few autonomy-related items that would not allow for a sense of autonomy to be met and could lead to decreased intrinsic motivation. In contrast, opportunities for self-direction, choice, and acknowledgment of feelings were found to enhance intrinsic motivation, because it allows individuals to feel a greater sense of autonomy (Deci & Ryan, 1985). Not only do coaches play an important role, but teammates do as well. If athletes feel more connected to their teammates, they are more likely to feel a sense of belonging and meet that need for relatedness. Feeling connected to other teammates can have a large impact



on individual and team performance, as well as self-determined motivation (Blanchard & Vallerand, 1996).

### *Research in Sport*

Past research has acknowledged the need for athletes to feel competent, autonomous, and related in their sport. With coaches playing a huge role in athletes meeting these needs, Amorose and Anderson-Butcher (2007) examined the relationship between an autonomy-supportive coaching style (i.e., coaches relinquish some control to athletes) and adolescent athletes' motivation. Athletes at the collegiate level perceived their coaches fostered a less autonomy supportive environment, but considered themselves to be more competent than in high school. The study also supported SDT, finding that reasons for participating in the sport (i.e., pleasure, satisfaction) would be more self-determined in nature if athletes felt competent, autonomous, and a sense of relatedness (Amorose & Anderson-Butcher, 2007). The researchers also reported that the three basic psychological needs were positively related to the degree to which athletes noticed their coaches to be autonomy-supportive in their interactions. Coaches play a huge role in athletes' lives and understanding how motivation lies on the SDT continuum can assist coaches in making sure their athletes stay motivated and continue with their sport.

Clearly, coaches could be a determining factor in whether collegiate athletes complete all of their athletic eligibility. The manner in which coaches structure practices and training regimens, their decision making style, and the quantity and quality of the feedback they give to their athletes are all behaviors with critical motivational implications (Horn, 2002). While coaches should be trying to foster intrinsic motivation among their athletes, it is important for them to help shape the messages that athletes construe. For example, Deci and Ryan (2000) describe how athletes' cognitive evaluation can vary widely in interpreting information.

Receiving a college athletic scholarship might foster extrinsic motivation for many athletes, although this conclusion is too simplistic. Amorose and Horn (2000), found that athletes on scholarship reported higher levels of intrinsic motivation while those not on scholarship reported lower levels of intrinsic motivation. The researchers suggest that the athletes did not perceive the scholarship as a controlling factor of their behavior, but rather an indication of their high skill level, which contributed to fulfilling their need of competence. The way that these scholarships are interpreted play a role in whether they promote intrinsic or extrinsic motivation. If coaches are telling their athletes that their scholarship could be decreased the following year if they do not hit certain marks or stats, this could foster more extrinsic motivation since the coach is putting pressure on the athlete to perform at a high level to keep their scholarship. In fact, athletes may begin to perceive that they have less control over their sport participation and could begin to question their competence.

Researchers have also considered whether athletes whose basic psychological needs are not met may be more likely to drop out of their sport. Sarrazin et al. (2002) examined whether collegiate athletes' motivational levels (i.e., based on SDT) predict their intention to continue their sport involvement. They found that athletes who reported higher intrinsic motivation were more likely to indicate they would continue their sport participation (Sarrazin et al, 2002). In a similar vein, Alvarez et al. (2012) found that adolescent soccer players, whose basic psychological needs were met, had lower dropout rates. Examining the factors that impact athletes' intrinsic verse extrinsic motivation is extremely important, because those factors can influence athletes' long-term participation in sport.

### *Present Study*

While there are numerous studies on dropout in youth sport, as well as many studies

evaluating the environment that a coach creates, there is little research examining why collegiate DI student-athletes decide to end their sport careers early. Continuing this line of research with collegiate athletes can be beneficial. If athletes who are intrinsically motivated are more likely to complete their college athletic eligibility, and athletes who complete their college athletic eligibility are more likely to graduate from college, it would follow that the NCAA would be invested in understanding how to foster intrinsic motivation among all their athletes.

The purpose of this study was to examine athletes' sport experiences using SDT as a framework to consider their perceptions of the extent that they felt autonomy, competence, and relatedness during their sport experiences. The responses of athletes who completed their sport eligibility were contrasted with those who did not complete their eligibility. Each pair of athletes were matched up by sport, year played, team and gender. A qualitative design was being employed whereby athletes were interviewed and a thematic analysis was conducted to examine overarching themes. Athletes were asked questions relating to their collegiate sport experience, relationships with coaches and teammates, and the extent that their BPN were met while playing on their collegiate sport teams.

## **Method**

### **Participants**

For this study, a purposive sample of former DI athletes in various sports was selected. Pairs of former athletes were identified who played on the same team at the same time, but one athlete completed his/her collegiate eligibility and the other did not. Ten female athletes and eight male athletes were interviewed. The athletes participated in a variety of sports (cross-country, track, softball, rowing, football, and swimming). For athletes who did not complete their eligibility, it was a requirement for participation in this study that the reasons for ending their

college athletic career were within their personal control (i.e., not a career-ending injury).

Athletes were asked to report the following demographic information: gender, age, ethnicity, sport, college or university attended, and years competed at their university or college.

### **Procedure**

After receiving Institutional Research Board approval, individuals were contacted and invited to participate in this study. Interviews were scheduled with each participating athlete individually, and each interview was recorded and transcribed verbatim. Interviews were conducted in person or via telephone.

### **Interview Guide**

Qualitative research methods were used to explore athletes' motivation and participation at the D1 level. The interview guide was developed to examine factors influencing the athletes' motivation levels and decision to complete or not complete their collegiate eligibility. An introductory open-ended question was asked to allow the researcher to build rapport with the athletes and create a safe environment for the athletes to share their responses. Specifically, the researcher said, "I'm very interested in why some college students continue their participation in college sport while other athletes decide to end their participation early. Could you first give me some background on why you decided to play your college sport and the experience you had at the collegiate level?". Questions were then asked to obtain more information regarding the athletes' BPN (autonomy, competence, relatedness) and motivation levels.

- Control/Autonomy: Can you tell me how you came to the decision initially to play college sport? How did others' opinions influence the decision you made? How much control did you feel you had within practice or during competition? What about when you made the decision to end your college sport career?

- Competence: Tell me about your ability level in your sport. How did you feel more or less competent when you first joined the team vs. when you ended your career? What kinds of things happened that made you feel competent/not competent? What kinds of things did your coach and teammates do to make you feel competent/not competent?
- Relatedness (sense of belonging): How did you/did you not feel a sense of belonging on your collegiate team? What type of support did you receive from your coaches? What type of support did you receive from your teammates?
- Motivation: What were some things that kept you motivated to participate in your sport throughout college? How did your motivation in your sport increase/decrease throughout your collegiate sport experience? What were some of the main reasons for it increasing/decreasing?

### **Data Analysis**

Data was analyzed using phenomenological methods. Once the data collection was completed, the researcher transcribed the interviews and read them multiple times to gain familiarity with the athletes' responses. The athletes' responses were first categorized by whether they completed their eligibility. Next, the responses of each group (i.e., those who did and did not complete their eligibility) were further categorized by a) motivation levels, b) autonomy, c) competence, and d) relatedness. The goal will be to consider the extent that each group of athletes had their psychological needs met during their college athletic career.

### **Dependability and Trustworthiness**

Several procedures were incorporated into the study to enhance its dependability and trustworthiness, which included semi-structured interviews, transcription of data, coding, storage

of transcripts, use of research assistants to help with data analysis, and a detailed description of athletes' experiences.

## **Results**

A qualitative analysis was conducted to reveal themes within the athletes' responses to describe their sense of autonomy, competence, and relatedness, based on whether they did or did not complete their eligibility. Results for each of the BPN are presented below.

### **Autonomy: Athletes who completed eligibility**

Figure 1 outlines the themes that emerged from athletes' responses regarding autonomy, specifically for those who completed their eligibility. Athletes who did complete their eligibility identified how their high sense of autonomy came from their coaches, teammates, and other personal factors. With regard to their coaches, athletes described coaches' behaviors in terms of practice/training versus competition. Specific to practice and training, athletes described how their coaches allowed them to lead aspects of practice (drills, stretches), gave them a voice when it came to their training, and often took the athletes' input into account. A former male cross-country athlete said, "I had control over a lot of my own personal training. And even though he's the one writing the workouts, writing the training plan, assigning the weekly mileage, I had input in every one of those things."

With competition, athletes' felt like they had some choices within competitions (e.g., which track events they wanted to compete in at certain meets). Athletes also frequently mentioned feeling control over their playing time. They shared that the coach was fair when determining which athletes start or get more playing time, which made them feel more in control of knowing what they needed to do to play. Overall coaches wanted to include the athletes in the decision-making process when it came to various aspects of the athletes' sport.

Athletes who completed eligibility also mentioned that they had a sense of autonomy when it came to their ability to contribute to creating the culture of their team. Athletes felt like they could influence their teammates attitudes, which in return created a positive team culture. Athletes also noted personal factors that gave them a sense of autonomy. They discussed, for example, that being able to control their attitude or mindset when coming to practice or competition made them have a better view of their role as an athlete. A female swimmer spoke about her change in attitude when performances weren't going the way she had hoped:

College sports are awesome, but I want to enjoy what I'm doing. So the attitude that I brought to practice was more internal. I was trying to not beat myself up as much, and it's hard when it's a habit, to be really hard on yourself. But to internally change my attitude I went to external sources, whether that was encouraging my teammates or focusing on complimenting them on what they're doing well. Then it snapped me out of criticizing myself and then increased the fun.

A female rower also mentioned setting attitude goals to make sure that things outside of practice wouldn't affect her attitude within practice. These athletes recognized their ability to positively impact the team culture.

Another theme that came under personal control was the ability to choose one's college. Athletes who completed eligibility were more likely to share that outside factors were not the major factors to choose a college. Indeed, they felt they were the ones guiding the ship in making this important decision. This led them to feel a high sense of autonomy.

There were a few athletes who did not complete eligibility, but conferred a high sense of autonomy. These athletes were track or cross-country athletes who felt like they had control over their workouts (could determine how many miles they ran that day) or control over competitions

(which races to compete in specific meets). Besides those few athletes, autonomy was lacking for all other athletes who did not complete eligibility.

### **Autonomy: Athletes who did not complete eligibility**

The analysis of athletes' responses regarding autonomy, specifically those who did not complete their eligibility, are presented in Figure 2. Athletes who did not complete their eligibility discussed coaches and other personal factors as reasons for not feeling a high sense of autonomy. With regard to coaches, athletes described coaches' behaviors in terms of practice/training, competition, and team culture. Specific to practice/training, athletes mentioned coaches not allowing individual differences in training, athletes having no say in the schedule (practices, meetings, competitions), and athletes being unable to see the practice plan until they showed up to practice. A softball player discussed the lack of control she felt when the coaches wouldn't let the team know the practice plan until they arrived at practice:

It would have been nice to actually know the practice plan. They would hide it from us.

[...] Actually knowing what you're doing at practice I think would be super beneficial.

[...] I just think it would help people's anxiety about practice or prepare them.

When discussing competitions, athletes mentioned feeling a lack of autonomy when coaches would push them to compete when injured and not having a say in whether or not they red-shirted. A football player shared a story of an injured athlete wanting to red-shirt when he became injured, but the coach dismissed the idea and pushed him to play. "He was hurting real bad. I want to say he had something [wrong] with his shoulder. [...] He wanted to sit out and the coach was like, 'no and if you do we'll pull your scholarship'." Another point that athletes brought up when it came to not experiencing a sense of autonomy was how the coach viewed their ability. Athletes felt like there were unclear criteria for determining who competes. A



female rower discussed how the data on the Erg (indoor rower) on a single day seemed to be more important than her performance in the boats. “If you had a bad day on the Erg, it was like, well you’re getting demoted in the boats because you perform bad on the Erg. Whereas maybe you’re better in the boats just because of how rowing is.” This athlete described feeling a definite lack of control.

On this front, team culture was another theme that emerged whereby athletes who did not complete their eligibility described how their coaches created an environment where athletes perceived they had little control. For example, athletes discussed strict rules that the coach had put in place and inconsistent expectations for athletes within a team. A female softball player spoke about the confining policies that the coach put into place for away trips:

This was insane. [...] She took away our phones when we got on the bus to go to an away trip. She took away our phones because she thought we were distracted and she wouldn’t give them back to us until we were home at [school] again. [...] Also, sometimes she would let us go off with our families on away trips or sometimes she wouldn’t. And it depended really if we had played well or not. [...] So there was one weekend we were in [city] and my parents had gone down there and I didn’t see them except for in between games.

These actions on the part of coaches made athletes feel helpless and miss out on receiving important and needed support. A female volleyball player also discussed how some athletes “Would pierce their tongue in the middle of the season, which was against the rules or dye their hair blue and [coach] would still let them travel and play and [coach] would leave behind other people who were eligible”. The coach’s expectations varied depending on the athlete, which made her feel a lack of control.

There were two reoccurring categories that athletes mentioned that described personal reasons that they did not feel autonomy within their sport experience: sacrifices and choosing their college. With sacrifices, a female swimmer specifically discussed the numerous sacrifices she had to make to be on the team, which make her feel a lack of control:

I wasn't allowed to go out on a Friday night because I had to go to practice the next morning, or I wasn't allowed to eat certain things because they wouldn't help me perform better or I wasn't allowed to shave my legs for a certain amount of time. [...] Once I stopped swimming I realized there are so many things I can do. I was able to study abroad; I was able to do internships over the summer. I wasn't able to before because I was training so hard. I'm able to go to a date party if I want to; I'm able to go get pizza on a Tuesday night. So yeah, I realized once I stopped swimming how much I really didn't like feeling like I was being controlled.

This athlete's lack of control lead directly to diminished motivation within her sport.

In terms of choosing a college, athletes felt as though there were outside sources influencing their decision. Some of these outside sources were parents, financial restrictions, and limited offers. A female volleyball player said, "It was my choice to go there, but I still feel like [my dad] kind of influenced me more towards the DI offers, even though I would have played more at smaller schools", while a female cross-country athlete said, "My parents definitely had a lot of say in the choice. I had originally denied and turned down any scholarship opportunity and chose not to run. They kind of pushed me towards running". A male track athlete discussed that he chose his school because of financial restrictions, so he chose an in-state university that would be less expensive.

There were a couple athletes who did complete eligibility, but felt like autonomy was lacking in their sport experience. However, these athletes did discuss that they could still share input and had a good line of communication with their coach, whereas athletes who did not complete eligibility usually lacked that line of communication. The difference seemed to be that having a coach who was creating opportunities for dialog, even when aspects of the coach's style was controlling, helped athletes feel some degree of autonomy that was not experienced by athletes who did not complete their eligibility.

### **Competence: Athletes who completed eligibility**

Figure 3 highlights the analysis of athletes' responses regarding competence, specifically for those who completed their eligibility. Athletes who did complete their eligibility identified how their high sense of competence came from their coaches, teammates, and other personal factors. First, athletes described their coaches' as engaging in consistently supportive behaviors. They discussed the positive and specific technical instruction that the coaches gave, as well as praise and recognition. Individuals were given feedback that pertained to them specifically, instead of being given feedback as a group that very rarely specified what the athlete could do to improve a certain technique or skill. Another coach specific theme that athletes discussed was that the coaches would put poor performances into perspective. For example, a female cross-country athlete explained how the coach would boost her confidence even after a poor workout or race. "Coach was very positive. He was always upbeat. Even if you had a bad workout he was like, 'Oh it doesn't matter right now, we still have four weeks until conference, you still have time' or 'we just came off a long run'. He always made excuses for you, so it made you feel good. If I didn't have somebody who made excuses for me, like coach did all the time, I would probably think lesser of myself." While this athlete described her coach's behavior as making

excuses, it can be more accurately viewed as helping the athlete stay positive, focus on the strengths of the practice, avoid catastrophizing the day, and maintaining perceptions of competence.

Another supportive coaching behavior that was frequently discussed by athletes who completed their eligibility was the personalized meetings that they would have with their coaches to talk about training or to set specific goals for the season. These athletes mentioned how their coaches continued to believe in their athletes even when their sport performances may have been discouraging. A male cross-country athlete shared how he was struggling with his training and competitions his freshman year, but his coach didn't give up on him and continued to believe in him during a rough year. "It would have been easy for coach to just say, 'Alright guys, maybe this isn't for you' and then try to bring in new [runners]. That happens all the time. But, he stuck onto us and he guided us through and then he kind of started transitioning us into leadership roles." This coach clearly helped his athletes see that their competence would be developed over time with their continued hard work and contributions to the team. Such coaching behaviors played a huge role in athletes feeling competent.

Athletes also described the important role their teammates played in building their competence. Athletes that completed eligibility discussed how the culture of the team made them feel more competent. The specific things that they discussed were teammates providing encouragement, giving tips on technique, and exuding confidence that was contagious. A softball player described her teammates as confident players, which made her feel more confident in her abilities. "We had a very confident group of people. So I feel like even if you weren't a confident person, you became confident, because you were surrounded by a bunch of confident, cocky people. [...] They were all just a bunch of confident girls. [...] I knew I was good, but everyone

else was like, ‘I’m the best player’ kind of thing. I had never been around that. [...] But I feel like it just comes out of you when you’re surrounded by a lot of people that have that mentality”. Clearly, for many of the athletes who completed their eligibility, their teammates played a key role in developing their sense of competence.

In addition, athletes who completed eligibility mentioned three different categories that fit under personal reasons for feeling competent in their sport: ability, scholarship, and an other category. Specific to ability, athletes mentioned that they felt their ability was commensurate with their teammates. A female cross-country athlete said, “I was looking for somewhere that I could fit in, in terms of ability. I wouldn’t be at the bottom, but yet I wouldn’t be on the very top of the roster.” Athletes also noted receiving a lot of playing time. A female volleyball player and softball player shared that she played the majority of their four years. Improvement and success were also two reoccurring themes that athletes mentioned for feeling more competent in their sport. A male cross-country athlete shared an experience where he saw major improvement in his abilities as a runner. “I cracked the top ten list. I think I was number nine. It just felt so good. It felt like... I knew that I could be at this level. And when I finally did it, it was awesome.”

Scholarship also affected athletes’ sense of competence. Many athletes felt more competent in their sport abilities when they received a scholarship or when their scholarship was raised. A softball player discussed how her scholarship made her feel more confident as a player:

I was on a full ride, but it made me feel confident coming in because [coach] had only seen me play twice before she offered me. So, it made me feel like, wow, she really saw something in me that she really liked. It made me feel good coming in.

A male cross-country athlete also shared how his scholarship made him feel more competent in his sport:

Athletically, it wasn't a huge scholarship, but it was enough to be like, hey, we want you on the team. [...] It was cool to feel like he was investing in [me] a little bit or at least that I was wanted. I wasn't offered a scholarship from the other school in state I visited, so that was enough for me to be like, yeah, I could probably fit in pretty well.

A female rower also spoke about her view of her scholarship:

I didn't have a scholarship my entire freshman year. [...] But then I got put on scholarship my sophomore year, and then it increased my junior year, and then it increased again my senior year. [...] Getting more [scholarship] kind of verified I was getting better. Money was not motivation for me by any chance [...], but it was definitely that verification like okay, this is me getting better; the coaches are seeing it too.

Athletes who completed their eligibility seemed to perceive scholarship less as extrinsic motivation but as reinforcement of their continued hard work and commitment to their sport.

Other personal reasons that athletes felt competent included being identified as a team captain or leader, feeling greater confidence because they didn't redshirt their freshmen year, and feeling that they could control their personal motivational responses. In regard to not redshirting, a female volleyball player was one who shared how she believed that not redshirting her freshman year helped her feel more prepared, while the other freshmen who did redshirt had a tougher time finding their place on the team and didn't receive as many opportunities. "You can tell that extra year of [playing] helped a lot. [...] I think it definitely did help to get that first year under your belt compared to the rest of them [who were] fighting for a spot after that."

In terms of personal motivational responses, some athletes, such as this swimmer, described being able to change their mindset, which then allowed them to feel more competent on their teams:

It depended on my mindset change. So, what I would have defined as competent my freshman year was top times on the team, being one of the fastest people, all performance based. And then my competence at the end [was based on knowing] that I was the best teammate to every single one of my teammates that I could possibly be. So my competence as an overall athlete was probably higher. [...] [My competence was more so dependent on me] supporting and encouraging teammates [and knowing] what my role on the team was, outside of times. I was very confident in that [once I changed my mindset]. In other words, when this athlete defined competence based on factors she had more control over (being a supportive teammate), her perceptions of their competence were enhanced.

### **Competence: Athletes who did not complete eligibility**

Figure 4 shows the analysis of athletes' responses regarding competence, specifically for those who did not complete their eligibility. Athletes who did not complete their eligibility discussed coaches, teammates, and other personal factors as reasons for not feeling competent in their sports. To begin, athletes identified the key role their coaches played, describing coaches' unsupportive behaviors and the lack of consistency within the coaching staff. Specific to unsupportive behaviors, athletes mentioned coaches not giving personalized technical instruction and being demeaning when giving technical instruction. A female swimmer described a time that she wanted personalized feedback from her coaches on her performance and received the opposite:

I remember getting done with the 200 fly and going to talk to my coach about the race that I had done and the feedback they were telling me...I don't even know if they were really watching me swim. They were giving such general feedback.

A female rower also spoke about the little instruction her and her teammates received while on the team:

I feel like [coach] would demean them in a way instead of providing constructive criticism. I feel like there could have been better ways of dealing with something. So for example, somebody would be positioned wrong in the boat and she would yell at them and not really give them a way to fix it. It was more like, ‘You’re doing this wrong, do better’, instead of being like ‘Hey, this is what you did wrong, why don’t you try this. Let’s see if this works.’ And then assess it after that happened and see if the changed fixed it.

Two more unsupportive coaching behaviors that were often discussed were that the coaches had favorites and the coaches only developed the “star” athletes. A female volleyball player spoke about her experience with the coaches only developing certain teammates:

They put all of their effort towards developing [the star athlete] and I kind of started comparing myself. [...] We had two senior All-American rock stars and [the coaches] literally went up to [two freshman] and were like ‘you guys are the next [All-Americans]’. They’d have private meetings with just those two working on it.

This resulted in other athletes on the team feeling unvalued and less competent.

Another unsupportive coaching behavior that was mentioned was athletes feeling a sense of competition with the coaches. A football player described how he felt as though he was competing against everyone on his team, including his coach. The coaches “play mind tricks with you and call you soft and call you the P word or the B word and things like that. As a man, you don’t want to be called that.” When asked if coaches would be upset if players shared input with them, he responded, “Absolutely, because they feel like someone’s questioning their



manhood.” Very similar to the documentary, *The Mask You Live In*, young men struggle with conforming to this societal idea of masculinity, that males should not express emotion, act tough, and value being in a dominant role. Male athletes can feel pressure to display a negative form of masculinity when coaches behave in an unsupportive way (Newsom & Congdon, 2015).

A lack of consistency was also discussed with athletes who did not complete their eligibility. Athletes felt that coaching changes created unnecessary stress. They also noted feeling the need to prove themselves to a new coaching staff because the expectations varied greatly with each coaching staff change. A football player described how there was a new coaching staff each year:

Every single year I had to prove myself and it was tough. It was tough because you have these coaches that come in and try to set their identity and they try to set their standards and it always changed. I wasn’t able to really have just one set standard. [...] The [coach] is supposed to set the standard, but there’s no consistency [when there’s a new head coach every year].

When the expectations are changing every year, it is difficult for an athlete to feel competent in their abilities when they may not be fitting each new coach’s standards.

With teammates, athletes who did not complete their eligibility discussed how the team culture made them feel less competent in their sport. Two themes under team culture that were mentioned are that teammates would talk down to one another and teammates weren’t encouraging. A male cross-country athlete spoke about the experiences he had with his teammates talking down to him:

Someone who came in with my group said ‘You’re slow; you don’t even deserve to be on the team. Why are you here?’ [...] With people talking down on me, people not really

having my back, not including me...I think that definitely took a toll on my mental competitiveness. It's like, well if these people who are doing well think I shouldn't be here, maybe I really shouldn't be here. Maybe I should have gone somewhere else or maybe I don't have the ability to run at this level like I thought I did.

Another theme under team culture is that athletes were nervous/fearful that teammates would evaluate their performance/ability as poor. A female cross-country athlete discussed how she felt that her teammates would evaluate her ability:

If we were racing around our home team, or home place where a lot of people from the school would see...and if I didn't feel very confident in my training leading up to that, I would be much more nervous of how my performance would be perceived. [...] I just wanted to not be seen as the really poor one out of all of the people.

Athletes' sense of competence was diminished when they had teammates that didn't fully believe in their abilities or try to boost their teammates' confidence.

In terms of personal reasons why competence was low, athletes mentioned ability, scholarship, and other reasons. With ability, they mentioned they no longer were the best athletes compared to high school, they received little to no playing time in college, they weren't seeing the success or improvement they were hoping for, and they felt as though their teammates had more experience or opportunities prior to college than they did. A softball player spoke about her playing time and opportunities on the team:

I wasn't playing nearly as much as I thought I should have been, and I had been working a lot harder. I just wasn't getting the chances that I thought I should have been given or other girls would get 10 chances and I would get one. If I screwed up on one chance, I'd be done, that was it.

Many athletes also described hitting a plateau and not seeing the results that they wanted.

A male track athlete described his experience:

I'm going to say [my competence] was pretty low. After my first indoor meet...it was a pretty humbling experience, because I realized everyone at this level is pretty good. You couldn't just do the bare minimum effort and cruise by, you had to give 100% and have your best race every week. [...] I looked at my times consistently across meets throughout the years, and for some meets they would get slightly faster and for some meets they'd get slightly slower, but it didn't really change that much. So that's why my confidence never really increased.

Further, athletes who had scholarships taken away or were never on scholarship shared that their competence was lower because of that. Some athletes also mentioned feeling insecure about being a walk-on on the team. Playing time and financial support were strong signals for athletes that they were competent in their sport.

Other personal factors that affected athletes' competence were injuries and feeling emotionally and physically exhausted during practice/competition. A female cross-country runner described her experience with injuries:

I lost confidence in myself. I lost the passion really. I just kind of started to feel like everyone was improving and I just was getting injured again. I just felt as if I was slipping away while my friends were succeeding.

A male cross-country athlete discussed feeling emotionally and physically terrible towards the end of his collegiate career. "Even when we went for an easy six mile run I felt exhausted. I fell off the pack. I would be slogging along trying to get to the end. [I] felt physically terrible, emotionally terrible, mentally terrible."

A few athletes who completed their eligibility acknowledged some of these issues regarding competence. Some athletes mentioned receiving negative feedback and had poor interactions with the coach, but as long as they received playing time and were performing at the level that they wanted, their competence remained high. A female volleyball player who completed her eligibility went more into depth on this:

I told my coach at the end of the year meetings...the only reason I can handle all the negativity is in the end all that matters to me is that I'm playing. I looked at all the other people who were never going to play and I would never do what they're doing. I wouldn't go through all this crap for four years just to sit the bench. The only reason for really staying was because I would get on the court. [...] I had to block [the coaches] out. I knew they were going to yell, but in the end the only reason why I made it back onto the court was because [I knew] I just couldn't let them get to me. I had to be confident in myself because the only one that was going to get me back on the court was myself.

### **Relatedness: Athletes who completed eligibility**

The final BPN is relatedness. Athletes' responses regarding relatedness, specifically those who completed their eligibility revealed three themes: coaches, teammates, and other personal factors. See Figure 5. To begin, athletes described their coaches' supportive behaviors as including having team bonding events, which helped the athletes feel a greater sense of belonging not only to their teammates, but also to their coaches. A softball player described how her coach enjoyed bringing the team together and putting on team bonding events:

We did a lot of team bonding. [Coach] was pretty big on team bonding stuff, so we would do team dinners at her house. I think it was my sophomore year that we did a team

sleepover at her house. And we would do a team triathlon. She just did a lot of stuff where we hung out as a group outside of the softball field.

Athletes also talked about their coaches having individual meetings with each athlete, having an open door policy with athletes coming to talk to them, and caring about the athletes outside of sport. A male track athlete discussed his relationship with his hurdle coach:

I was able to develop a personal relationship with her over four years where I was able to talk about stuff that wasn't just track related. I kind of had that more personal relationship with her where she was also a life coach as well as a track coach.

Another male cross-country athlete discussed his close relationship with his coach both in and out of the sport:

He's definitely somebody I look up to and he's somebody I think will definitely be a part of my life or somebody I'll reach out to in times of need for the rest of my life. [...] Even today, he still helps me out and he's a great person, he's somebody who I can count on.

Athletes also described the impact of their teammates' supportive behaviors. For example, athletes described how the upperclassmen would take them under their wing when they first joined the team. A football player said,

When I first got here, they had this thing where it was kind of like a buddy system in a way where I was grouped up with one of the older guys in my position group and he would try to incorporate me into things. He'd text me if the guys were hanging out somewhere. [...] That was one thing that they did to help us get into the group a little bit more.

A female softball player also described her experience with some of the older teammates on her team. "I had some [teammates] that had already played a year that kind of branched me out;

[they] were playing similar positions as me and helped me adjust from a travel ball level to a collegiate level”.

Other supportive behaviors that athletes discussed were hanging out outside of practice/competition, considering their teammates some of their best friends, feeling as though they could vent to their teammates if they were going through a tough time, and having teammates that were encouraging and who gave supportive feedback.

Athletes that completed eligibility also mentioned that they had support from other staff members within athletics. For example, a male track athlete discussed his relationship with his academic advisors in the athlete department:

In the athletic department, there were a lot of different people that were there for you. I know that I had one or two mentors in the athletic department that when I was down, I could go talk to them and they would hear me out. Usually just talking to them or venting to them, I could be like ‘It’s just an awful day, awful week, the coaches hate me, I hate myself’ and they could pick me back up and kind of get me back on my feet in another direction again. So that was really helpful.

When coaches, teammates, and other athletic staff make an effort to get to know one another on a more personal level and go out of their way to help each other out, athletes are more likely to indicate they felt a sense of belonging.

### **Relatedness: Athletes who did not complete eligibility**

The analysis of athletes’ responses regarding relatedness, specifically for those who did not complete their eligibility, is present in Figure 6. Athletes who did not complete their eligibility identified how their lack of relatedness came from their coaches, teammates, and other personal factors. First, athletes described their coaches’ unsupportive behaviors, many of which

also fell under the BPN of competence. As described by the athletes, these behaviors made the athletes feel less competent and less related to their coaches. These coaching behaviors are not wanting to hear input from players, having favorites, only developing the “star” athletes, insulting players, and saying they will help athletes transfer. A female volleyball player discussed how her coaches brought up that they would help her transfer.

When we had our meetings with them they were all about helping me try to transfer and I’m like, ‘I don’t want to transfer for one semester and start over’, so I was just done. The fact that they brought up wanting to help me transfer was kind of like...they don’t want me here.

Athletes also mentioned the lack of consistency with frequent coaching staff changes. This not only lowered competence for some athletes, but also lowered their sense of belonging. They discussed that it was difficult to form a relationship with a new coach each year. A football player described his experience with multiple coaches.

That next year my coaches got fired, [these were] the coaches that watched me and recruited me. So I had a whole different staff come in here. [...] My new position coach and I weren’t really getting along of course and we were bumping heads and things like that. [...] And of course things started getting good, my coach and I started getting on good terms and then he took a job at another school. So another coach came in and we started bumping heads. And of course same thing, towards the end we started getting cool and then he gets fired. Well another coach comes in and we start bumping heads.

Frequent coaching changes were a clear source of stress for athletes.

Unsupportive behaviors of their teammates were another factor athletes identified as diminishing their sense of relatedness. Athletes who did not complete their eligibility described

not fitting in with the “in group” and not hanging out with their teammates outside of practice. They also discussed not receiving support from their teammates. A male cross-country athlete described his experience with his teammates. When asked what he would have liked to have seen from his teammates, he responded,

I think it's a myriad of things. I think it includes both the out of practice sort of stuff...being more included on the day to day basis, as well as if I had a sucky workout, them not ignoring me or being like ‘Hey, that was shit, you need to do better’. Providing some sort of constructive criticism or being like ‘hey man, it's alright, you'll come back next time’ [would have been appreciated].

Two more teammate related themes that were discussed which were not having seniors they could look up to and having teammates that call each other names and talk down to one another. A male cross-country athlete described a time when his teammates talked down to him:

I'm sitting off to the side and they're running the course for one of the first cross-country meets of the season. I'm not going to be running it because I'm injured and I'm sitting there and they're running their workout and [a teammate] yells out ‘Look at loserville over there’. [...] That one stuck with me for a little bit.

Incidences such as these led athletes to feel disconnected to the team, which caused them to not have their BPN of relatedness met.

In terms of other personal factors, many athletes mentioned that injuries caused them to lose their sense of belonging. Athletes described how their teammates didn't want them around anymore, how coaches told their athletes that they didn't need to come to practice/competition, and they weren't allowed to travel with the team. A male cross-country athlete described his experience with his injury.



It's really easy to feel ostracized when you're not actually competing with the team [or] practicing with them. And the coaches can see that and they want to make sure that you're not wearing down the chemistry of the team. [...] So my sense of belonging was definitely down in the end.

Some athletes that completed eligibility also mentioned some of these themes related to a lack of relatedness in their sport. The difference is that they seemed to have at least one major support system that they could rely on. For example, a female volleyball player described her poor relationship with her coach, but how her teammates continued to be there for her:

Confiding in [my teammates]... they always understand. They're the only ones that understand really. Like the dynamics between you and the coaches or if they're being like really shitty that day at practice, [teammates] are able to sympathize with you. [...] A lot of times we were just like 'I hate him'. That's just plain and simple. We hated [the coach].

Overall, the athletes may not need to have a close relationship with every teammate and coach they work with on a daily basis, but as long as they have one of these as a support system, it is more likely they will have their BPN of relatedness met.

### *Intrinsic Motivation*

Athletes were asked to describe what their main sources of motivation were for their sport. Athletes who completed their eligibility and had their BPN met, described greater levels of intrinsic motivation to continue participating in their sport. A male cross-country athlete described his love for the sport and how much fun he had his last year.

I would say senior year was awesome...one of the best years of my life. It was awesome. [...] I loved going to practice every single day. It didn't matter if it was a long run, an easy run, a 6am practice, two-a-days.

A female cross-country athlete also described her favorite parts of her sport experience.

I really loved those workouts when you have a couple of teammates where all of us were just killing it together. We were running in a group. Even just a longer distance run during cross-country season. I think about those...those were the best. I wish I could still run like that. Just float.

### *Extrinsic Motivation*

On the other hand, athletes who did not complete their eligibility and did not have all three BPN met, shared many more extrinsic reasons for participating in their sport. A cross-country athlete that did not complete his eligibility described his extrinsic motivation for coming back from an injury. "I get a real kick out of proving somebody wrong when I can. [...] I'm going to go off on my own, improve myself massively, come back and show everyone up." A softball player noted that her extrinsic motivation came from other teammates. She didn't want to let them down or have them think differently of her abilities. "I was motivated to not make a mistake again. I didn't want the team to look down on me or think I was less or something".

Some athletes even seemed amotivated to continue participating in their sport. A football player that did not complete his eligibility said, "I just lost the love. I wasn't motivated to play ball at all. Intrinsically, extrinsically, however many other words there are for it, I wasn't motivated to play at all." A female swimmer also discussed her loss of motivation towards the end of her participation.

I always loved swimming, but I don't know...I would wake up in the morning, I would cry because I didn't want to go to practice or I would leave practice crying because I was just so over it. So that's when I kind of knew at that point, I just wasn't happy with myself. Is it really worth it to compromise my body, my emotions for swimming?

### **Discussion**

The purpose of this study was to examine the extent that athletes' BPN were met, based on whether they completed or did not complete their college athletic eligibility. According to SDT, athletes who have their BPN met (autonomy, competence, relatedness) are expected to be more intrinsically motivated, likely to have a positive sport experience, and continue their participation in sport over time compared to athletes who do not have their BPN met (Deci & Ryan, 2000a). The results of the current study align with the sport SDT literature and revealed that college athletes who completed their eligibility were more likely to have their BPN met when compared to those who did not complete their eligibility.

Athletes participated in in-depth interviews, providing detailed descriptions of the extent that they had each of the BPN. Athletes were able to reflect on their previous sport involvement and seemed to easily remember specific details of the collegiate athletic experience.

With regard to autonomy, the first BPN, athletes were able to recall vivid memories of either having or not having a sense of autonomy on their collegiate sport team. Athletes who completed their eligibility identified numerous strategies their coaches used to provide them autonomy. Interestingly, many of these strategies are minor and may appear to be unimportant. However, these were strategies that were not described by athletes who did not complete their eligibility, suggesting that these intentional behaviors of the coaches to give their athletes a sense of control may be quite important. A football player, for example, discussed feeling a sense of

autonomy when the coach asked him what the team wanted to eat during travel for away games. Instead of the coach making the decision for the entire team, he allowed for the players' input. Obviously, the coach may not be able to please 100 athletes on a team with a dining choice, but the athletes who completed their eligibility described coaches who made small gestures, such as these, that made athletes feel like they had a strong sense of autonomy.

The intentional efforts of these coaches to give their athletes a sense of autonomy may be particularly noteworthy, considering the athletes in this study participated at the DI level. DI athletics is the highest level of collegiate competition, and athletes have a packed schedule consisting of class, endless meetings, community service projects, and sometimes jobs, all on top of practice, competition, and travel. It is understandable that many DI athletes may perceive a lack of autonomy in their lives since they have little voice in creating their schedules or the activities that are subsumed within those activities (practice, etc.). Thus, it may not be surprising that they find it impactful when their coach gives them opportunities to display autonomy.

In a similar vein, athletes who did not complete their eligibility described a complete lack of autonomy. They indicated that their coaches made all decisions, both large and small. A female softball player described the little control she was given during practice:

There wasn't a lot of freedom at practice. It was pretty structured. There was always a plan typed out on a piece of paper. [The coach] had groups made up so you couldn't even pick your own group you're in and that kind of got in people's heads. [...] There really wasn't any say [for athletes]...even with drills or anything, there was not much.

These results suggest that coaches might benefit from reflecting on ways they could give their athletes as much control as possible. Coaches at all levels of sport may be beginning to see the importance of helping athletes experience autonomy. Joe Maddon, the manager for the Chicago

Cubs, just recently this year began to announce the team's lineup three days at a time so that the players know if, when, what position they will be playing, and the batting order. Maddon discusses how providing the lineup to his players in advance allows them to better prepare both mentally and physically and may reduce the pressure of players feeling the need to impress the coach in order to stay in the lineup. David Bote, a player for the Chicago Cubs, says Maddon "listens to what the guys have [to say] and that shows even more respect" (AP News).

Mallett (2015) also incorporated SDT principles to design an autonomy-supportive motivational climate to prepare the Australian's men's relay teams for the 2004 Olympic Games. This climate resulted in athletes enjoying their participation more and having better results than they did prior to adapting the autonomy-supportive climate. If elite sports teams can allow for their players to feel a sense of autonomy, college athletic coaches can likely find ways to give their athletes a greater sense of control.

With reference to competence, it is assumed that athletes at the DI level will have high levels of competence, but that is not always the case. Competence varies from athlete to athlete within a team. How one athlete views his/her competence in their sport may not be the same for someone else. Coaches' behaviors clearly impacted athletes' sense of competence. Athletes who completed their athletic eligibility recalled memories of coaches giving positive feedback and instruction on how to improve their technique, while those who did not complete their eligibility remembered coaches being demeaning and giving negative feedback. Those athletes who were receiving the positive feedback were more likely to feel competent and have that BPN met.

The findings from this study not only supported SDT, but also aligned with achievement goal perspective theory (AGPT). AGPT is a framework developed by Nicholls (1984) that examines two distinct motivational climates that can either increase or decrease individuals'

motivation. An ego-involving climate sends messages to athletes that success is achieved when they outperform others. This is done by fostering competition among teammates, only developing and recognizing “star” athletes, and punishing mistakes. In this study, athletes whose coaches seemed to create an ego-involving climate repeatedly discussed feeling a sense of competition between other teammates or the coaches. A female volleyball player described instances where her coach would want them to “talk trash [and] be aggressive” while at practice, which caused an ego-involved climate that made the athletes feel as though they were competing against one another rather than working together. This caused athletes’ competence to decrease and made them more likely to quit their sport.

On the other hand, a task-involving climate focuses on the athletes’ effort and improvement. Coaches can create this climate by acknowledging that mistakes are part of the learning process, cooperation is key amongst teammates, and by emphasizing that personal mastery is more important than comparing one’s skills to someone else’s (Fry & Newton, 2003). In this type of climate, individuals are more likely to feel competent in their abilities and will be more motivated in their sport. Athletes described coaches’ feedback as a “confidence booster” and coaches were supportive and continued to work with them even if their performances were subpar to what they wanted. Competence is a critical BPN and for athletes that weren’t on the end of receiving positive feedback and technical instruction from their coaches, their competence took a hit and decreased quickly over time.

Another point to be discussed is that the athletes that mentioned they were on scholarship described feeling more competent in their sport, which resulted in higher levels of intrinsic motivation. Most athletes did not perceive their scholarship as a controlling factor, but rather an indication of their skills (Amorose & Horn, 2000). The only athletes who saw it as a controlling

factor were the football players on full rides. The football player that did not complete eligibility mentioned that coaches would tell players that their scholarship would be taken away if they did not play. This shows that coaches should be mindful about how they approach discussing scholarships with their athletes, as it can affect athletes' competence if it is used in a way where one poor performance can be the deciding factor to whether athletes will lose their scholarships.

With regard to the third BPN, relatedness, athletes felt a greater sense of belonging on the team if they had a close relationship to their teammates, coaches, or both. The relationships were stronger if the coaches and teammates went out of their way to connect to other athletes on the team and form that bond. Team bonding was often brought up by the athletes who completed their eligibility as a significant factor that helped them feel a sense of belonging as soon as they arrived at college. The results from the current study align with research on caring climate in sport (Fry & Gano-Overway, 2010). Fry and Gano-Overway (2010) found that if an athlete perceives their environment as inviting, supportive, and respectful, athletes were more likely to feel a sense of belonging, which led them to have better relationships with their teammates and coaches, as well as enjoy their sport more and be more committed to their continued participation.

It is also noteworthy that many athletes who completed eligibility described how their coaches viewed them as more than athletes. CET addresses variability in intrinsic motivation due to specific social and environmental factors (Ryan & Deci, 2000a). The way coaches communicate and form relationships with their athletes can affect whether athletes have their BPN met. Mageau and Vallerand (2003), created a motivational model of the coach-athlete relationship that describes how coaches can influence athletes' motivation. The current study aligns with their model that coaches need to consider the athletes' perspectives and feelings,

while also highlighting the importance of requested tasks. When coaches do this, they communicate their involvement and respect for their athletes, which then leads to athletes feeling a sense of belonging.

Those athletes in the current study who did have their three BPN met, unsurprisingly, described themselves being more intrinsically motivated and completed their collegiate eligibility. These results align with Alvarez et al. (2012) who found that adolescent athletes, whose basic psychological needs were met, had lower dropout rates.

### **Limitations & Future Directions**

While this study had a novel qualitative approach that allowed for rich insight from DI athletes about their sport experiences, it is not without limitations. One limitation of this study is that DI athletes were included, so the findings cannot be generalized across other collegiate sport divisions. However, there is very little research examining college athletes' motivation, so exploring other levels of sport is an important area of inquiry. Another limitation of the study was that there was a 5-year window for when athletes had to have completed their collegiate athletic eligibility, and it is possible that athletes' recollections would have been different if ascertained closer to their participation on their teams. Even so, it appeared that athletes had no trouble remembering their past collegiate experiences. They recalled memories easily and none expressed difficulty in identifying the details of their playing days. For future research, it would be interesting to get exit interviews as athletes leave their collegiate sport to consider the extent that their BPN were met. This may allow them to give more current and updated accounts of their experience.

Another limitation of this study was the sole inclusion of the athletes' experiences, as the coaches' perceptions were not obtained. Because of this, it is impossible to know how the



coaches might have perceived the same experiences described by the athletes. The coaches' perceptions of their approach/behaviors may be entirely different than the athletes, and further research could explore both the athletes and their coaches' experiences together.

Additionally, researchers might interview athletes at other sport levels (youth, high school) to see if the same themes emerge when it comes to athletes' BPN among athletes who continue versus choose not to continue their sport involvement. There is limited qualitative research in the sport psychology literature surrounding BPN and motivation. Hearing the athletes' personal experiences and receiving direct quotes, brings to light further how important these three BPN are to allow athletes to not only enjoy their sport experience, but also continue their participation over time.

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Figure 1 : Perceptions of high autonomy identified by athletes who completed their eligibility

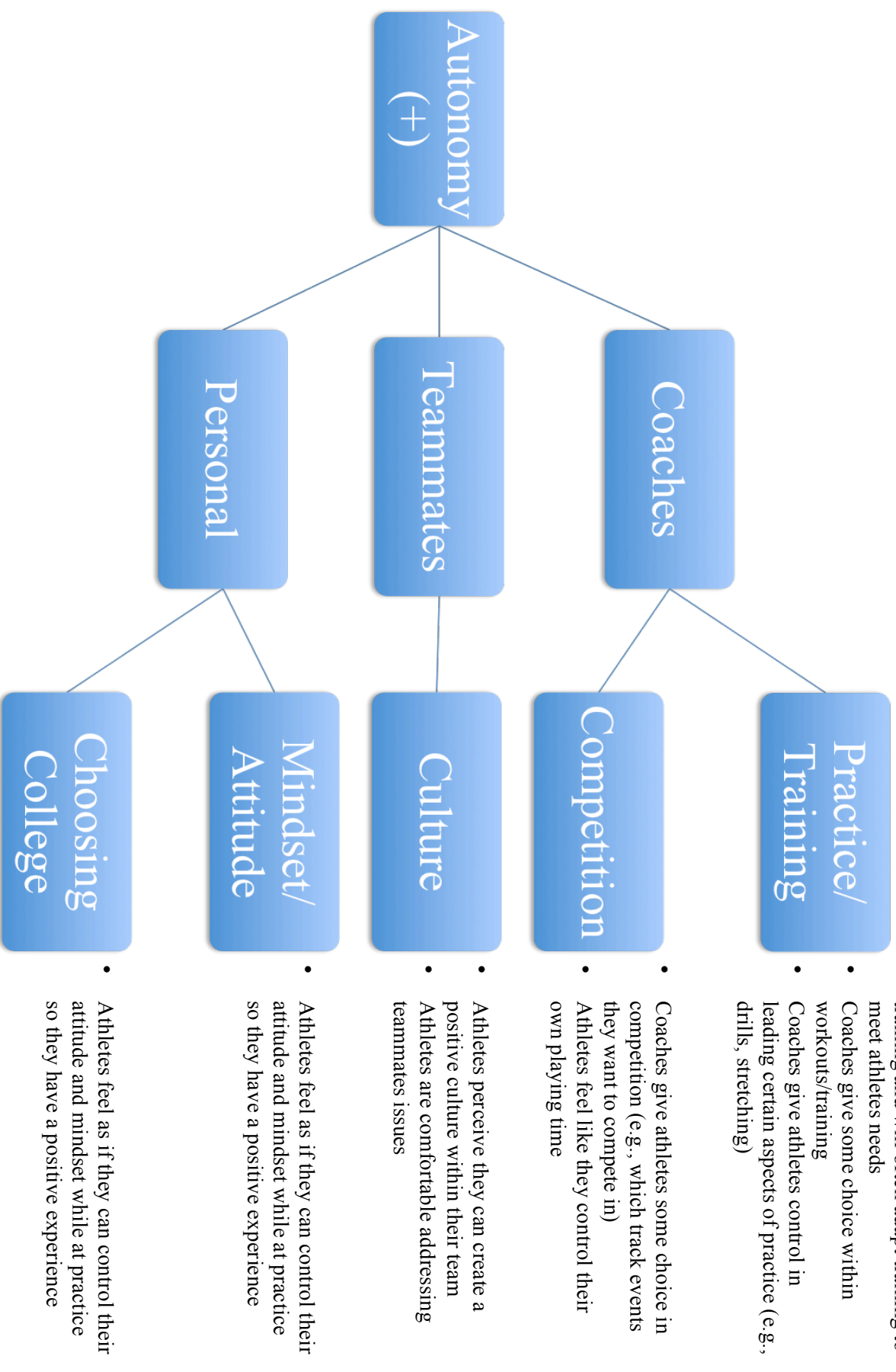


Figure 2: Perceptions of low autonomy identified by athletes who did not complete their eligibility

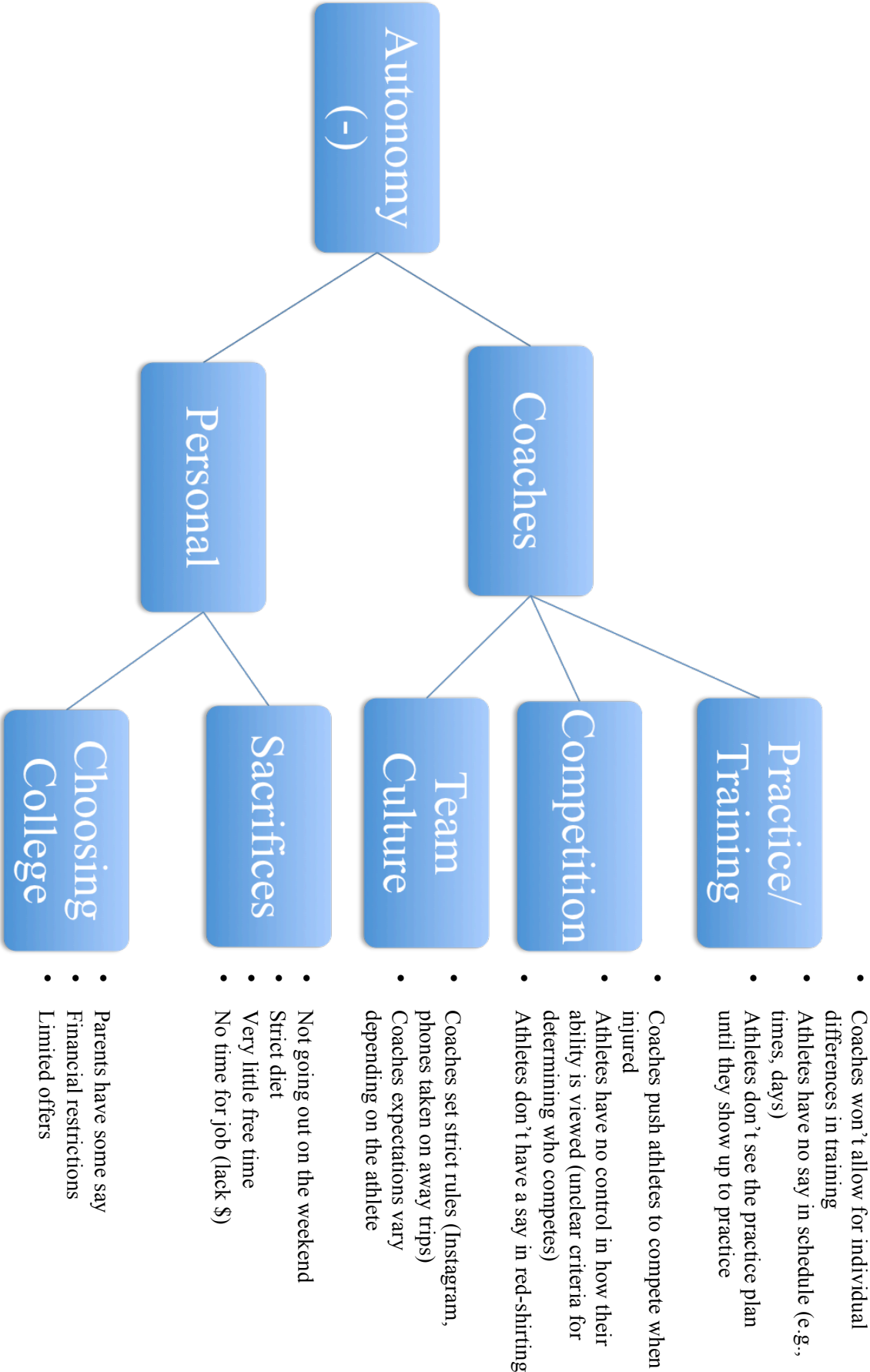


Figure 3: Perceptions of high competence identified by athletes who completed their eligibility

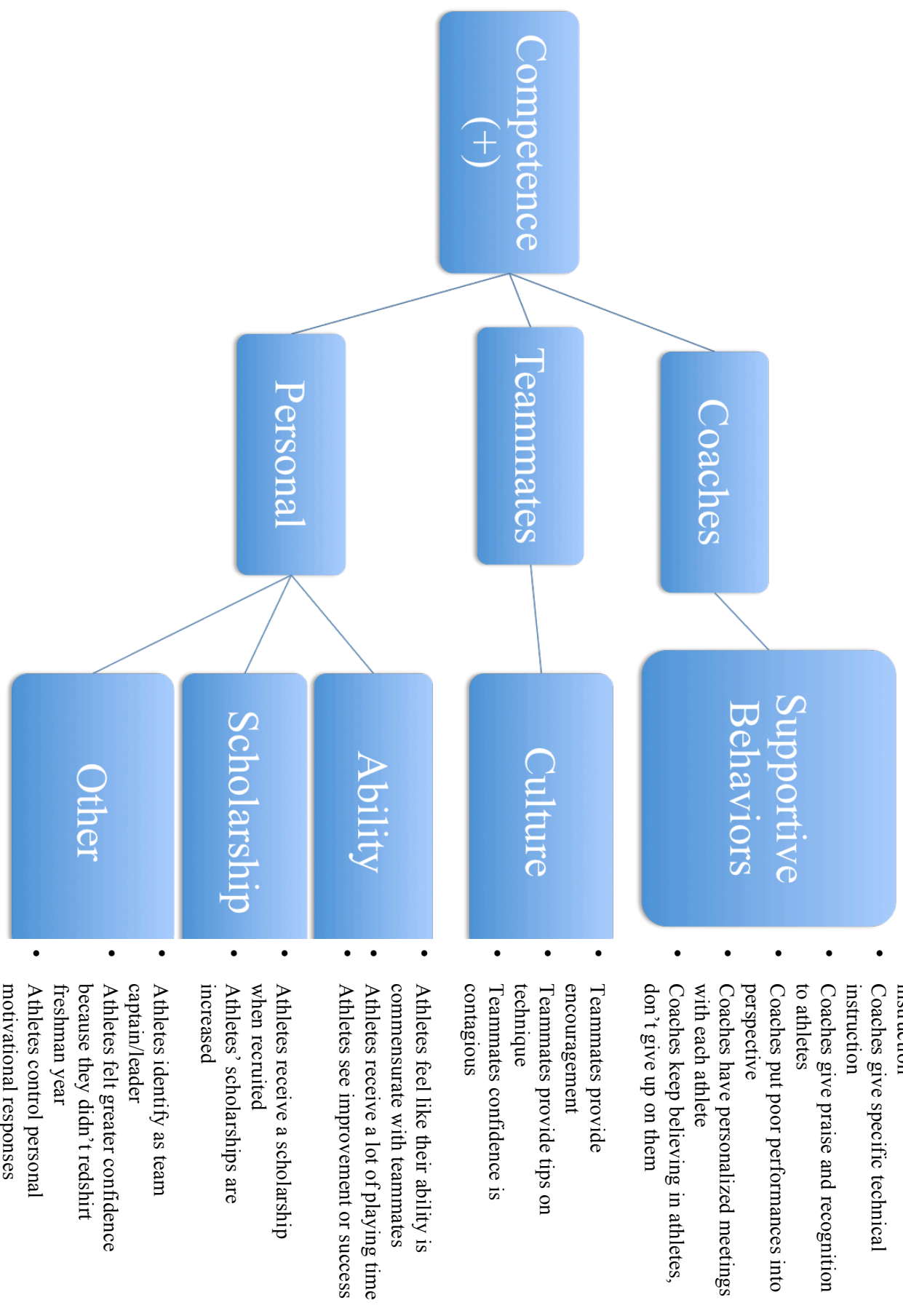


Figure 4: Perceptions of low competence identified by athletes who completed their eligibility

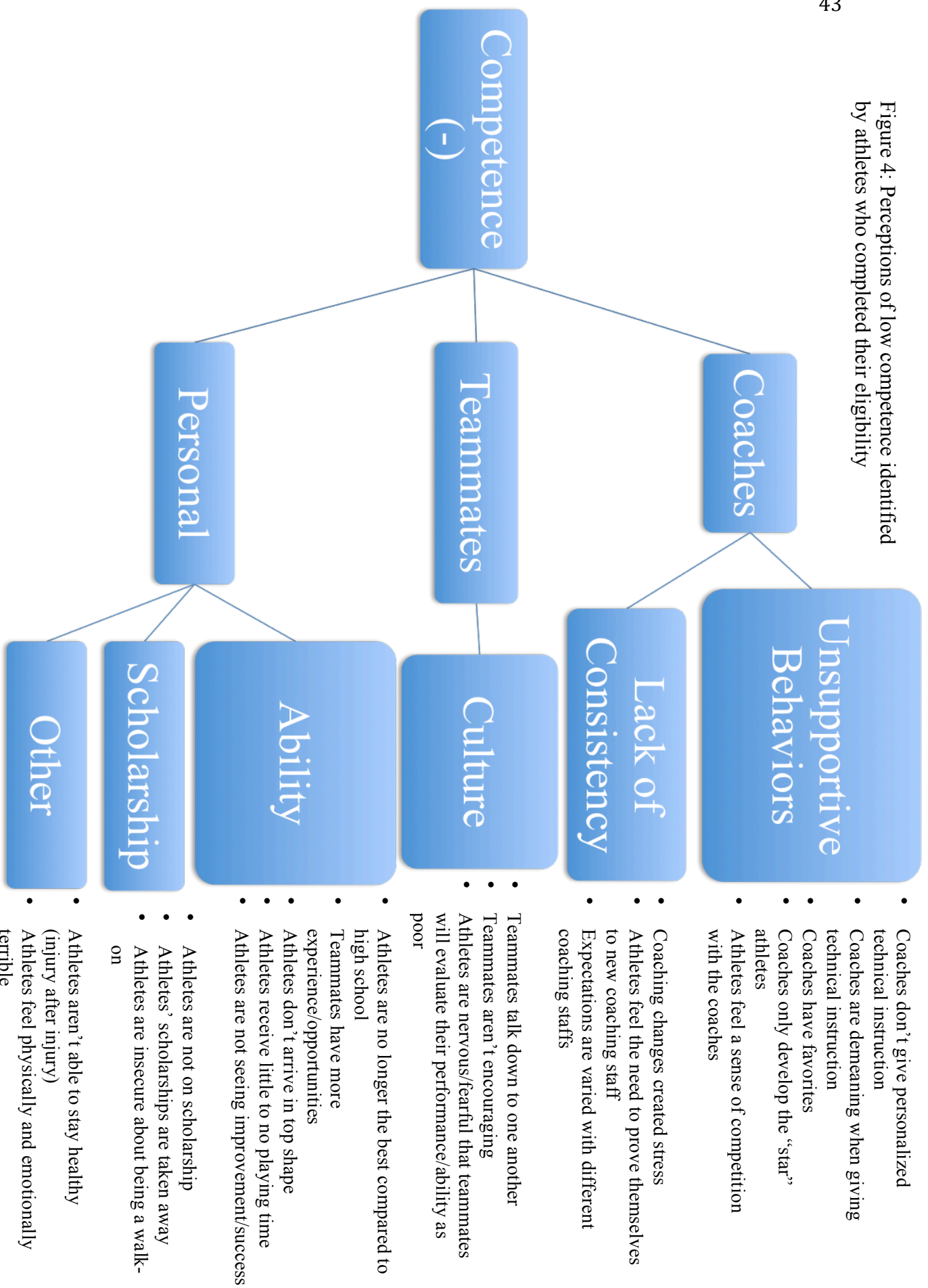


Figure 5: Perceptions of high relatedness identified by athletes who completed their eligibility

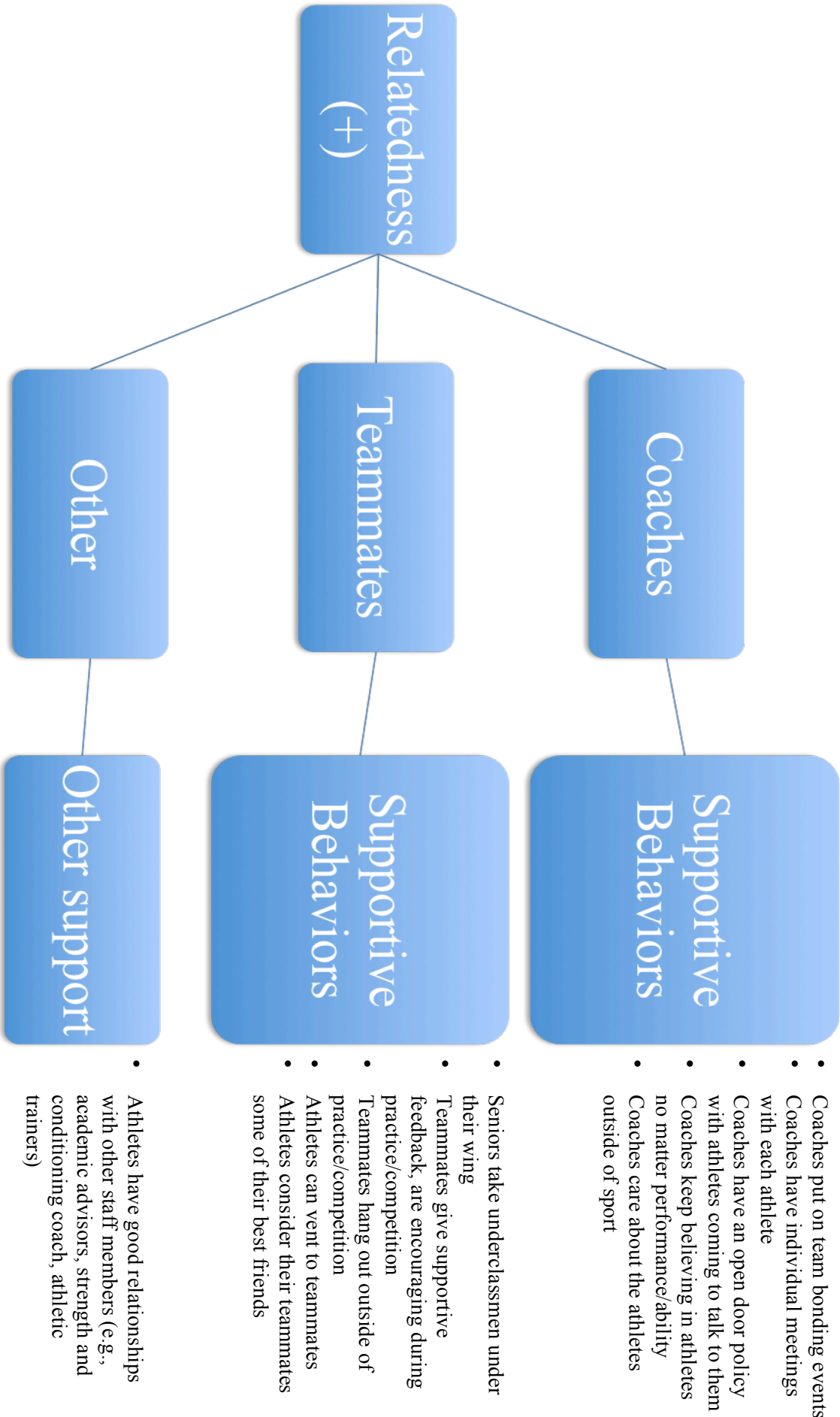
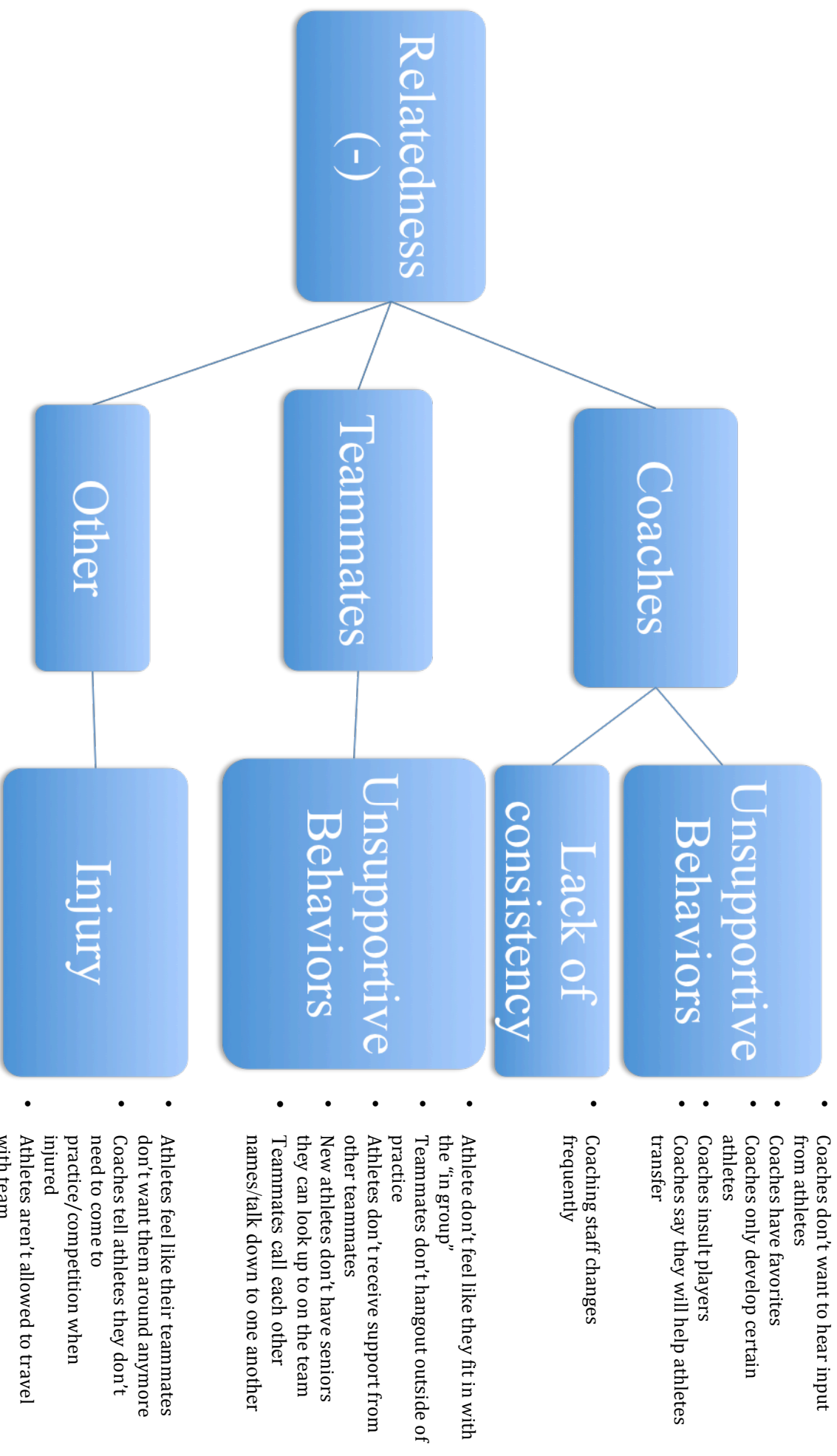




Figure 6: Perceptions of low relatedness identified by athletes who did not complete their eligibility



## Appendices

Sidney A. Hirsch

University of Kansas

May 2019

## **Appendix A: Extended Literature Review**

“Nearly half a million college athletes make up the 19,500 teams that send more than 52,500 participants to compete each year in the NCAA’s 90 championships in 24 sports across 3 divisions” (NCAA, n.d.). In most cases, college athletes have a five-year clock to complete their four years of eligibility. Many finish their full amount of eligibility, while others decide to end their collegiate careers early. There are many factors that play into athletes’ deciding to end early, including financial reasons, coaching style, loss of passion, time commitment, injuries, burnout, academics, family, and more. While there are numerous reasons athletes might have for quitting a sport that they once loved, a key factor may be their motivation. Motivation is defined as the “desire or willingness to do something” (Oxford Dictionary, 2018). While some reasons athletes have for not completing their eligibility are beyond their control (e.g., injury), decreased motivation is a factor athletes can address.

There are three main types of motivation; intrinsic, extrinsic, and amotivation. Intrinsic motivation involves doing partaking in an activity for reasons that are personal to the participant, such as excitement, challenge, or a sense of accomplishment. Extrinsic motivation involves doing something for external reasons. This could include money, verbal praise, applause, medals, trophies, and other awards. Amotivation is the lack of any motivation at all to engage in a certain activity. Within extrinsic motivation, there are four separate levels, including external regulation, introjected regulation, identified regulation, and integrated regulation. External regulation is on the end closest to amotivation, which acknowledges individuals being more motivated by external rewards and punishment. Introjected regulation is more ego-based and involves internal rewards and punishment that individuals place upon themselves. For example, they may feel guilt for not doing an activity (e.g., off-season conditioning). Closer to intrinsic motivation is

identified regulation, which involves individuals placing some personal importance in the reasons they play. The last of the extrinsic motivation levels is integrated regulation. This is the most autonomous form of extrinsic motivation, where athletes are consciously valuing their reasons for playing their sport and are participating in it for their own personal reasons (Ryan & Deci, 2000a). Most athletes probably participate in their sport for a combination of extrinsic and intrinsic reasons. Determining what motivates an individual can be extremely important at a young age, because it will continue throughout their lifetime. If children are playing a sport for extrinsic reasons, for example receiving rewards from parents for participating, they are less likely to continue on with the sport once that extrinsic motivation is taken away. Allowing children to play a sport for a majority of intrinsic reasons will help them develop their love for the sport and will give them a better chance to continue on with the sport later on in life, since intrinsic motivation will be determined based on their own behaviors.

Deci and Ryan's self-determination theory (SDT) offers a framework that provides an understanding into the influences that promote motivation and healthy psychological and behavioral performance (2000b). Their theory examines the human need for competence, autonomy, and relatedness to fulfill self-determined motivation. Deci and Ryan believe these are the basic psychological needs that an individual needs to thrive. The need for competence suggests that an individuals' needs to feel sufficient ability in their sport or activity. For example, athletes will be more likely to feel competence if they continue to improve in their sport and feel like they may be accomplishing something in their sport, whether big or small. The need for autonomy reflects the need to have some control over their actions and believe they regulate their own behaviors. An example of athletes feeling autonomy within their sport could be having a say in a specific workout for the week. When coaches communicate well with their athletes and

acknowledge their feelings rather than only being “in charge” and not giving their athletes any say, the athletes are more likely to feel that sense of autonomy, which will then increase intrinsic motivation. The need for relatedness represents the need to feel a sense of belonging to a group. When athletes feel like they belong on the team and have close friends on the team, this increases the sense of relatedness they feel. SDT specifies that individuals will be more likely to engage in activities that satisfy these three needs and will be more likely to continue to be intrinsically motivated in the activity.

A model that is centered around SDT is the Hierarchical Model of Intrinsic and Extrinsic Motivation (HMIEM) proposed by Vallerand (1997). This model proposes a four-stage sequence, which includes social factors, psychological mediators, types of motivation, and consequences (Sarrazin et al., 2002). The model examines intrinsic, extrinsic, and amotivation at different levels of analysis. These levels are global, contextual, and situational, and they are molded by social and personal factors. Vallerand and Lalande (2011), describe global factors as an individual’s personality or most usual way of functioning, whereas contextual factors are more specific contexts within life, for example a person’s education or job. Motivation at the global level is considered to be the trait level of motivation. Motivation at the contextual level accounts for the possibility that a person may have developed intraindividual motivational orientations that could differentiate in various contexts. For example, one person may have more intrinsic motivation for leisure activities and more extrinsic motivation towards work, while that may be opposite for another individual. The final level, situational, explains the motivational state that a person experiences when engaging in a particular activity at a given moment in time. The model is structurally organized to combine both the social psychological and personality determinants to predict motivation and the outcomes (Vallerand & Lalande, 2011).

A study done by Sarrazin et al. (2002) used HMIEM to look at motivation and dropout in sport. The four-stage sequence has led to prediction in high school dropout, so they decided to use the model to look at self-determined motivation in handball athletes and their intentions of dropping out of the game. The athletes were adolescents on multiple French teams. The total number of athletes that participated was 335. The participants completed a questionnaire that assessed the players' motivation for handball, how the athletes perceived the motivational climate underlined by the coach, motivational mediators, and future sport goals. To measure the motivation of the players, the Sport Motivation Scale (SMS) was used. This scale assessed levels of amotivation, three types of extrinsic motivation (external, introjected, identified regulation), and three types of intrinsic motivation (to know, toward accomplishments, to experience stimulation). The Perceived Motivational Climate in Sport Questionnaire (PMCSQ) was used to reflect whether the athletes perceived their coaches emphasized a task-involving or ego-involving climate. For the motivation mediators portion of the questionnaire, the handball players were given a total of 11 questions that were adapted from the perceived competence, autonomy, and relatedness in life domains questionnaires. The questions were reworded to focus on these three needs within their handball team. The final portion of the survey, future sport intentions, the athletes responded to four items that helped the researchers to understand these players' goals for their sport. An example item was "I often consider dropping out of handball" (p. 403). All items on the questionnaire were answered on a 7-point scale from strongly disagree to strongly agree (some were reversed scoring). Female handball players that had dropped out of their sport had high levels of amotivation and lower levels of intrinsic motivation than those who continued with handball. Levels of extrinsic motivation were not found to be predictive of dropout in the sport. The results did, however, support the hypothesis that a lack of self-

determined motivation leads to dropping out of sport. Findings also suggested that handball athletes who perceived their coaches as more ego-involving were more likely to drop out. The more task-involving the motivational climate was perceived, the more autonomy, competence, and relatedness the athletes felt on the team. An ego-involving climate predicted low perceived autonomy, but was found to be unrelated to competence or relatedness. A suggestion for this finding is that athletes might feel competent and related in an ego-involving climate as long as the team is winning (Sarrazin et al, 2002). The task-involving climate allows athletes to feel cooperation between teammates and allows them to feel as if they play an important role on the team. This increases intrinsic motivation within the handball players and decreases the chances of dropout in their sport.

Coaches play a huge role in athletes' lives and knowing the link between SDT and motivation can assist coaches in making sure their athletes stay motivated and continue with their sport. Coaches could be a determining factor in whether collegiate athletes complete all of their athletic eligibility. The manner in which coaches structure practices and training regimens, their decision making style, and the quantity and quality of the feedback they give to their athletes are all behaviors with critical motivational implications (Horn, 2002). From a coaching perspective, Mageau and Vallerand (2003) specified some of the key behaviors that contribute to an autonomy-supportive interpersonal style. They believe that autonomy-supportive coaches will provide choices within specific limits and rules; provide validation for tasks, limits and rules; acknowledge others' feelings; allow opportunities to take initiatives and do independent work; provide non-controlling feedback; avoid overt control, guilt-inducing criticisms, controlling statements and tangible rewards; and prevent ego-involvement from taking place. If coaches try to be more conscious about some of these things, such as the way they give feedback to their

athletes, they can improve the climate on their teams and allow for the athletes to feel more autonomy when it comes to their sport.

Amorose and Anderson-Butcher (2007) examined the relationship between an autonomy-supportive coaching style and athletes' motivation. The participants included 581 athletes ranging from 13 to 25 years in age. They were assessed using the Sport Climate Questionnaire (SCC) to understand their perceptions of whether or not their coaches exhibited autonomy-supportive behaviors. The participants were also asked questions based on the need for autonomy, competence, and relatedness to evaluate their fundamental human needs. This was done with a different questionnaire for each category. The Sport Motivation Scale was also used to measure the individuals' motivation in the sport that they were participating. The findings were split by competitive level (high school vs. college). Athletes at the collegiate level perceived their coaches fostered a less autonomy supportive environment, but considered themselves to be more competent than in high school (Amorose & Anderson-Butcher, 2007). The study also supported SDT, finding that reasons for participating in the sport were going to be more self-determined in nature if athletes felt competent, autonomous, and sense of relatedness (Amorose & Anderson-Butcher, 2007).

Another result found within the study was that the three basic psychological needs were positively related to the degree to which athletes noticed their coaches to be autonomy-supportive in their interactions. Also, a significant indirect effect was found on the athletes' motivational orientation to be related to the autonomy-supportive environment perceived by the athletes (Amorose & Anderson-Butcher, 2007). While supporting SDT, these results also supported a mediational effect that the degree to which athletes saw their coaches to be autonomy-supportive significantly predicted the athletes' perceived competence, autonomy, and



sense of relatedness, which then lead to the prediction of their motivational orientation. If coaches ensured a task-involving climate and made sure to exhibit some of the behaviors mentioned above by Mageau and Vallerand (2003), the motivational levels of their athletes would be much higher, and the retention of their athletes would more than likely be much higher as well.

A study conducted by Gearity and Murray (2011) examined how collegiate athletes are affected psychologically by poor coaching. In this study, collegiate athletes were interviewed and asked to describe the experiences they have had with poor coaching. Five main themes were developed within the results. These were, poor teaching by the coach, uncaring, unfair, inhibiting athletes' mental skills, and athlete coping. The theme of poor teaching by the coach was described as the coach being poor at providing the athletes with instruction or feedback and ineffectively managing the athletes. When looking at SDT, the need for competence may not be met in many of these athletes because with poor teaching and feedback, athletes may not feel like they can successfully perform up to their potential. The theme of uncaring was explained as the coach not being there for the athletes and not providing any emotional support. Only caring about winning was a common characteristic of uncaring coaches. According to SDT, athletes need to feel a sense of belonging with teammates and coaches. It is important for athletes to have a positive connection with the coach and when a coach is not showing support towards the athlete, it is difficult to meet the need of relatedness. The theme of unfair was described as the coach favoring certain athletes and ridiculing others. This led to many athletes distrusting their coaches. The theme of inhibiting athletes' mental skills was represented by the various ways that coaches damaged mental performance of athletes on their teams. "I could have been a lot more successful" was a repeated quote amongst players who felt as if their coach inhibited their mental

skills (p. 215). The theme of athlete coping described how athletes dealt with the poor coaching and ways they found to adapt to it. Many athletes commonly stated that they would avoid and ignore their coaches, so that the poor coaching would not consume them. The climate of a team should not be one where athletes feel like they need to avoid their coach if they want to improve in their sport. Poor coaching can take away all three needs that SDT says we need to have to feel the highest level of motivation. Coaches play a massive roll in their athletes' motivation and if they make sure they are coaching in a way that gives athletes some autonomy, allows them to feel competent, and provides them with a sense of belonging, this can be worthwhile in getting athletes to continue on with their sport and use their full amount of collegiate eligibility.

Reinboth and Duda (2006) completed one of the first longitudinal studies examining the environment that the coaches set for their teams and the changes in need satisfaction of collegiate athletes. Perceptions of a task-involving climate structured by the coach were positively related to an increase in satisfaction of all three psychological needs (autonomy, competence, relatedness). A task-involving climate was reinforced by positively recognizing effort, personal progress, and by allowing all athletes to feel like they play an important role on the team. If athletes perceived their coaches to foster a more ego-involving climate, team relatedness was less likely to be met. Rivalry between teammates and favoring the best players reduced the feeling of relatedness on the teams.

Reinboth and Duda (2006) suggest using Epstein's (1988) TARGET approach to coaching. This acronym represents task, authority, reward, grouping, evaluation, and timing. Using this approach can help in creating a more task-involving motivational climate. The authority portion of TARGET would help athletes meet the need for autonomy. Coaches can give their athletes opportunities to be part of the decision making process and help them create

their own goals. Coaches can also be more active in this by giving reasons behind their choices for having the athletes participate in certain activities. For example, if coaches wanted their athletes to do a yoga session twice a week, the athletes may be more accepting of the task if they are given the reasoning behind why this will help them within their sport. The evaluation portion of TARGET can be used to increase athletes' competence. Coaches can do this by asking their athletes to evaluate their own performances and also by giving positive feedback to each athlete. The grouping portion is also valuable to encourage relatedness on the team. Reinboth and Duda (2006) found that the coach-athlete relationship was more important to athletes' well-being rather than team relatedness, so they suggest coaches to be conscious of treating their athletes as valued people, rather than just a performer for their team. Applying some of these aspects of TARGET could potentially improve the motivational climate of a team, which could allow for athletes to meet their psychological needs of autonomy, competence, and relatedness, and be more likely to continue on with their sport.

A qualitative study completed by Dodd, Fry, and Brown (2010), looked at athletes' perceptions of both coaches' and teammates' caring and uncaring behaviors. Youth athletes were asked four open-ended questions pertaining to how their coaches and teammates make them feel and what certain behaviors coaches and teammates display that make them feel like they do not care. Based on the responses, various themes were presented based on caring or not caring behaviors. Caring themes were praise, encouragement, committed to helping athletes improve, genuinely caring about athletes as people, showing concern when athletes are injured or ill, and having fun and socializing with the athletes. These themes came across for both teammates and coaches. The athletes perceiving uncaring coaching behaviors occurred when coaches created a negative atmosphere, treated athletes unfairly, were not committed to coaching, required too

much conditioning, lacked sympathy for injuries, and overemphasized winning. Only one main theme emerged for uncaring behaviors by teammates and this was that teammates create a negative atmosphere through poor communication and social skills. If youth athletes are going to continue on with sport throughout high school and maybe even into college, a caring climate needs to be in place at the start. Actions of coaches and teammates can play an important role in an athlete continuing or not continuing with their sport. Creating an environment that is caring, acknowledges effort, and supports all team members can help athletes maximize their performance and development within their sport.

Not only should the climate be task-involving rather than ego-involving, but the goals that the athletes have set for themselves should also be task-oriented. Cetinkalp (2012) examined the role of achievement goals and self-perception in situational motivation for Turkish athletes. The Situational Motivation Scale was used to evaluate whether the athletes' motivation for their sport was more extrinsic or intrinsic. To measure self-determined motivation, the Self-Determination Index (SDI) was calculated. The SDI score ranges from -18 to +18, where higher scores indicate a higher level of self-determination towards their sport. For men and women combined, they retrieved scores as low as -16.5 to as high as +18. Using the Perception of Success Questionnaire, Cetinkalp looked at achievement goals. This was helpful in determining whether the athletes were more task- or ego-oriented. Self-perception was another item that was measured using the Physical Self-perception profile.

The results of Cetinkalp's study showed that men exhibited more external regulation than women, which means the athletes are more motivated based on external rewards they may receive. Scores on task orientation were a positive predictor for male's intrinsic motivation, while sport competence and task orientation were significant predictors of intrinsic motivation

for females. Cetinkalp believes that training programs should focus on tasks that allow athletes to increase their competencies. Knowing athletes task orientation and how they want to develop in their sport would be beneficial in knowing how to train each individual athlete. Since female athletes exhibit more intrinsic motivation with more sport competence, they may need to complete drills or certain training techniques in a way that builds their confidence. If athletes have to practice the same thing time after time, without feeling like they are improving, this may be detrimental to their motivation levels, and not only for females, but for males as well.

Hollembeak and Amorose (2005) also looked at coaching behavior and how it can effect motivation in athletes. They had 280 athletes assess coaching behavior based on the Leadership Scale for Sports (LSS). They also looked at levels of intrinsic motivation from the Sport Motivation Scale. The researchers also came up with their own items based off of Deci and Ryan's Self Determination Theory to look at competence, autonomy, and relatedness. When athletes experience autonomy, competence, and relatedness from their coaches, intrinsic motivation was increased. For example, when coaches have a more democratic behavior rather than an autocratic behavior, autonomy is positively impacted. Together, the studies reviewed here suggest that coaching style plays a huge part in how motivated athletes may be and whether they are more intrinsically or extrinsically motivated.

Burnout could be another factor that determines whether athletes finish their full amount of collegiate athletic eligibility. Many athletes experience burnout at some point during their athletic career. Lemyre et al (2007), studied self-determined motivation to see if it could predict which athletes may be more susceptible to burnout. They state that Deci and Ryan's self-determination theory claims that athletes' motivational levels range from more to less self-determined. It is hypothesized that when motivation is highly self-determined, athletes will

perceive more autonomy or their own behavior. Motivation is then expected to be more self-adaptive. Lemyre et al (2007) examined different dimensions of athlete burnout, including “emotional and physical exhaustion, devaluation of sport participation, and reduced sense of accomplishment” (p. 115). They had their participants complete the Sport Motivation Scale (SMS), Short Overtraining Symptoms Questionnaire (SOSQ), and the Athlete Burnout Questionnaire (ABQ). The results showed that motivation remains when an athlete is over trained, but when athletes perceive burnout they typically show signs of demotivation. When levels of self-determined motivation were low at the beginning of the season, the athletes were also more likely to experience burnout at the end of the season. A more self-determined athlete may be less likely to experience burnout at the end of the season. From a coach’s perspective, noticing low levels of self-determined motivation in their athletes and knowing how to help athletes increase levels of motivation may help prevent burnout towards the end of the season.

Not only could coaches help increase motivation and decrease the chances of burnout, but teammates could as well. According to Defreese and Smith (2013), teammates can also play a large role in determining someone’s self-determined motivation and their likelihood of burnout. Defreese and Smith looked at perceived support availability (Social Provisions Scale), received support (Inventory of Socially Supportive Behaviors), support satisfaction (Social Support Questionnaire), athlete burnout (Athlete Burnout Questionnaire), and self-determined motivation (Sport Motivation Scale). The results of the study showed that perceived support availability was inversely associated with burnout and positively associated with self-determined motivation. Thus, the amount of access to a support system athletes believe they have available to them, will more likely decrease their chances of burnout, as well as encourage them to have more self-determined motivation. In this case, athletes did not actually have to have received the support to

feel this way, but more so know that they have a support system available when needed. From a teammate perspective, knowing the symptoms of burnout (i.e., emotional, mental, and physical exhaustion), and being able to acknowledge the fact that the teammate is experiencing a loss of motivation due to this, could help athletes in the long run if they are able to notice that they are experiencing burnout and take appropriate steps to deal with it.

Overtraining, which can be similar to burnout in ways, can also lead to dropout in sports. Overtraining is defined as a non-intentional decrement in performance lasting long-term and results from a failure to recover sufficiently from a buildup of training and non-training stress. Overtraining usually leads to a decline in performance and can bring along many other symptoms, such as fatigue, sleep loss, irritability, increased exhaustion, loss of appetite, and greater likelihood of injuries (Lemyre et al., 2007). Overtraining has been found to lead to exhaustion, both physically and mentally, and a decline in performance, which can lead an athlete to dropping out of their sport. Repetitive overtraining can diminish athletes' positive feelings for their sport, and continuous decline in performance can negatively impact individuals' outlooks toward their sport. If coaches know how to properly train their athletes, as well as provide them with mental skills when short bouts of overtraining or burnout may occur, athletes may be more likely to overcome these difficulties and be less likely to drop out.

Injury is also extremely common in sports, especially at more elite levels since the quantity of workouts and practices normally increases. When athletes become injured, it is important for them to have continued social support to motivate them through rehabilitation. An injury can cause psychological distress, anxiety, depression, and low self-esteem. This can make it difficult to remain motivated without the support from others. Yang et al (2010) studied the effect that social support has in facilitating recovery from injury. Most athletes stated that they

received most of their social support from friends and family, but after an injury, they reported relying more on coaches, athletic trainers, and physicians for social support. Their study highlighted that during a time of injury, athletes need emotional support beyond direct help in healing their injury. Yang et al (2010) also made a good point that athletic trainers should not only care for the athletes physical injuries, but should also be able to recognize various psychological responses that may come along after obtaining an injury. They should be able to make the appropriate referrals if they cannot provide the support necessary. If athletes feel as if the support from their teammates and coaches is no longer existent due to their state of injury, the motivation to go through rehab and partake in the advised exercises needed to rehabilitate their injury may be lost. Both coach and teammate support is important in all aspects of sport. If that motivation is lost to injury than the chances of dropout in their sport is increased.

Scholarships can also be another variable that play a role in athletes' motivation. While many would think of a scholarship as an extrinsic reward and therefore lead towards more extrinsic motivation, some studies show that it is quite the opposite. Amorose and Horn (2000), found that athletes on scholarship reported higher levels of intrinsic motivation while those not on scholarship reported lower levels of intrinsic motivation. Amorose and Horn believe that the athletes did not perceive the scholarship as a controlling factor of their behavior, but rather an indication of their skills, which contributed to fulfilling their need of competence. The way that these scholarships are interpreted could also play a role in whether they are perceived as intrinsic or extrinsic motivation. If coaches are telling their athletes that their scholarship could be decreased the following year if they do not achieve specific performance goals, this could foster more extrinsic motivation since the coach is putting pressure on the athlete to perform at a high level to only keep their scholarship. In fact, the motivation that the scholarship holds on athletes



may start to shift from informational to controlling.

Cremades et al. (2010) also examined track athletes and their extrinsic versus intrinsic motivation depending on whether they were scholarship or non-scholarship athletes. They separated intrinsic motivation into three categories: to know, to accomplish, and experience stimulation. Intrinsic motivation to know was described as learning, discovering, and trying to comprehend new concepts. To accomplish was explained as being determined to accomplish specific tasks or goals, and to experience stimulation was defined as for the enjoyable feelings an act presents. They also divided extrinsic motivation into the categories of identified, external regulation, and introjected. Deci and Ryan (2000a) explain identified extrinsic motivation as a self-determined form of extrinsic motivation. A person showing extrinsic motivation has recognized the personal importance of a behavior and has therefore acknowledged its regulation as his or her own behavior. Individuals see value in their behavior and find importance within it. External regulation is quite similar to amotivation. It is the least autonomous form of extrinsic motivation according to Deci and Ryan. The individuals' behaviors are executed to obtain an externally imposed reward. The final type of extrinsic motivation that Cremades et al. identifies is introjected. This type of extrinsic motivation is defined by Deci and Ryan as a form of internal regulation that is still fairly controlling because people execute such actions with the feeling of pressure in order to evade guilt or anxiety. The researchers also included amotivation.

Cremades et al. had the male and female collegiate student athletes complete the Sport Motivation Scale (SMS), separating the athletes by scholarship and non-scholarship, and by gender. Their results revealed that non-scholarship athletes had greater levels of intrinsic motivation and lower levels of extrinsic motivation. Amotivation was found to be low in both groups of athletes. When separated by gender, female athletes had greater levels of intrinsic

motivation and lower levels of extrinsic motivation compared to male athletes. Further, when looking at gender and scholarship status combined, female non-scholarship athletes had the greatest levels of intrinsic motivation. (Cremades et al, 2010) The relationship between scholarship and motivation is complex and can either enhance extrinsic and intrinsic motivation or decrease them depending on how athletes perceive the rewards (i.e., as controlling, competence).

Not only can external forces, such as coaches, scholarships, and sport climate, have a part in determining athletes' motivation, but what about internal forces such as athletes' mental toughness? Gucciardi (2010) examined the relationship between mental toughness clusters and achievement goals and sport motivation. Adolescent Australian footballers were assessed on their mental toughness through the Mental Toughness Inventory. The Mental Toughness Inventory consisted of four components including "thrive through challenge", "sport awareness", "tough attitude", and "desire success" (p. 618). The participants' achievement goals were also assessed; mastery-approach, mastery-avoidance, performance-approach, and performance avoidance. This was done using the 12-item Achievement Goals Questionnaire-Sport. The Sport Motivation Scale was also used to examine levels of intrinsic and extrinsic motivation. The results of the study showed that with respect to achievement goals, the high mental toughness cluster conveyed significantly higher levels of both approach goals than the moderate mental toughness cluster (Gucciardi, 2010). This result was consistent with prior research and indicated that athletes that have high-perceived competence are more likely to adopt approach goals rather than avoidance goals. Approach goals focus on the positive, which is a good outlook to take in all scenarios. The high mental toughness cluster also reported higher levels of intrinsic

motivation, identified regulation, and external regulation than the moderate mental toughness cluster.

Gucciardi et al. (2014) also assessed mental toughness and its relationship with behavioral perseverance. They state that even though an individual may have varying degrees of situational demands, that person will be able to deliver high performance consistently due to the level of mental toughness he or she has. Since perseverance is seen as a characteristic of motivated individuals, mental toughness could definitely play a key part in determining someone's motivation levels. Mental toughness could also make a large impact on whether or not someone completes all of his or her collegiate athletic eligibility.

If mental toughness can make a big impact on athletes' motivation and their continuing of the sport, various key elements are necessary in order to maintain mental toughness. According to Nicholls et al (2016), mentally tough athletes are more aware of unsupportive coaching behaviors. From surveying athletes, they found that there was a positive relationship between mental toughness and a task-involving climate, and a negative relationship between mental toughness and an ego-involving climate. A task-involving climate and mental toughness was also positively correlated with supportive coach behaviors, whereas unsupportive coach behaviors were positively correlated with an ego-involving climate. An interesting finding in this article is that mentally tough athletes are more conscious of unsupportive coaching behaviors, compared to less mentally tough athletes. It is shown that these athletes may view criticism from coaches more constructively than less mentally tough athletes. It is possible that athletes who are more mentally tough will be able to make themselves more motivated and not have to rely on coaches or other outside sources (scholarship, rewards, etc.) to motivate them to compete in their sport.

In a study done by Kaiser et al (2009), they found that stress intensity and control appraisal were associated with mental toughness. Their results indicated that personality traits such as mental toughness, may influence the coping process directly through the choice of coping strategy or indirectly in terms of the stressor they are faced with. Their study went more into depth with the kinds of specific coping strategies that work for mentally tough individuals. Athletes rate their efforts as more effective when they use problem-focused coping strategies.

Various mental skills can help athletes have a more positive outlook, which could increase motivation in their sport. Mental skills can help athletes prepare for competition. Hackfort and Schwelkmezer (1993) state that self-talk is dialogue that athletes have internally with themselves. Individuals can interpret feelings and perceptions, as well as change evaluations within themselves. They can also give themselves positive reinforcement and instruction on the task at hand. This mental skill can be a key factor in improving someone's motivation within his or her sport. Two types of self-talk are instructional and motivational, which can both be powerful in different situations. Theodorakis et al (2008) define instructional self-talk as statements related to focusing on the task, technical information related to performing the task, and intentional choices, whereas motivational self-talk refers to statements related to building the athletes confidence, improving mood, and increasing effort.

Another mental skill that can help athletes prepare for training and competition, and make them feel more in control of their mind and body are relaxation techniques. Relaxation skills can be used in various circumstances, including relieving muscle tensions, optimizing the recovery process between training sessions, and storing energy to use at the right moments (Pineschi & Di Pietro, 2013). There are numerous ways to use relaxation techniques and finding the correct ones for each individual athlete is important. Pineschi and Di Pietro (2013) suggest that three phases

should be used when developing a relaxation skill. These three phases involve beginning with relaxing breathing from the abdomen, then doing a complete body scan starting from the head and finishing at the feet. The complete body scan should allow for the athlete to notice any muscle tension in specific areas of the body. The final phase that they suggest is using imagery to control the environment and imagine exactly what the athletes want to have happen, and also feeling able to manipulate aspects of the image if he or she wishes to do so. Relaxation techniques may be difficult for an athlete to adjust to immediately, but with practice, they can become useful in preparing an athlete for practice or competition.

Goal setting is another mental skill that can positively influence an athletes' motivation. Athletes want to feel as if they are accomplishing a goal, but they also do not want it to be so farfetched that it may be impossible to reach that goal. According to Judge et al. (2010), athletes and coaches normally focus on outcome goals rather than process goals, when really it should be the other way around. An example of an outcome goal would be winning a championship game or match. Outcome goals normally cause more anxiety for athletes because the outcome of the whole performance is usually uncontrollable. Process goals, on the other hand, are more controllable and are based on the individual athlete's physical and mental goals. An example of a process goal could be to complete a certain skill by the end of the week. Maybe an athlete is struggling with left-handed lay-ups, so their goal may be able to make 10 in a row by the end of the week. Process goals can allow athletes to challenge themselves on what they need to improve on individually. Coaches are more likely to have overall goals for the whole team to accomplish, but sitting down with each athlete and talking about what they could improve and how they can do so would be motivating to each athlete. Feedback is necessary in order to

effectively monitor and achieve the goals. It allows flow to occur and gives athletes more motivation to continue with their goals (Judge et al., 2010).

Numerous factors can impact athletes' motivation levels. Each individual athlete can find his or her motivation from different sources, but knowing which ones make that athlete's motivation increase can be extremely important. If coaches, teammates, and parents could help increase and improve athletes' motivation, athletes may be more likely to complete their full amount of collegiate athletic eligibility. Knowing how to make the sport climate task-involving and build for autonomy, competence, and relatedness in the sport are two big factors that coaches should consider key. Even learning mental skills as mentioned above can help athletes make sure not only that they are in physical shape, but that they are on top of their mental game, which is just as important.

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## Appendix B: A

Hello Former College Athletes,

My name is Sidney Hirsch and I am a Master's Student at the University of Kansas. I ran track and cross-country at Wichita State. This semester I am collecting data for my thesis research, which explores athletes' sport experience at the college level.

With my study I am recruiting athletes who...

- Are former DI college athletes (competed within the past 5 years)
- Either completed or did not complete their eligibility (decided to quit the sport on their own terms, not due to injury, family emergency)
- Are willing to sit down with me and be interviewed (approx. 60 min) about their college experience and the factors that led them to either complete or not complete their eligibility

Please note that confidentiality will be maintained and no identifying information will be used in my research.

If you are interested in participating in my study please contact me at [hirschsidney@ku.edu](mailto:hirschsidney@ku.edu)

Thanks so much for your help and please feel free to pass this on to anyone you may know. I am hoping to get athletes across a variety of sports.

### Appendix C: Verbal Consent Outline

As a student in the University of Kansas's Department of Health, Sport, and Exercise Sciences, I am conducting a research project about the basic psychological needs of collegiate student-athletes. I would like to interview you to obtain your views on your college sport experience. Your participation is expected to take about 60 minutes. You have no obligation to participate and you may discontinue your involvement at any time.

Your participation should cause no more discomfort than you would experience in your everyday life. Although participation may not benefit you directly, the information obtained from the study will help us gain a better understanding of the psychological needs of collegiate student-athletes and how these affect motivation and dropout in sport. Your identifiable information will not be shared unless (a) it is required by law or university policy, or (b) you give written permission.

*\*It is possible, however, with internet communications, that through intent or accident someone other than the intended recipient may hear your response.*

*\*\*This interview will be recorded. Recording is required to participate. You may stop taping at any time. I will transcribe the recordings. Only the faculty supervisor and myself will have access to recordings, which will be stored in a locked space and will be destroyed after the project is fully completed.*

Participation in the interview indicates your willingness to take part in this study and that you are at least 18 years old. Should you have any questions about this project or your participation in it you may ask me or my faculty supervisor, Dr. Mary Fry at the Department of Health, Sport, and Exercise Sciences. If you have any questions about your rights as a research participant, you may call the Human Research Protection Program at (785) 864-7429 or email [irb@ku.edu](mailto:irb@ku.edu).

## **Appendix D: Interview Guide**

Hello and thank you for your participation today. My name is Sidney Hirsch and I am a graduate student at the University of Kansas conducting my thesis in collegiate athletes' motivation and sport dropout rates. Thank you for taking the time to meet with me and talk to me about your college athletic experience. This interview will take approximately 60 minutes. I would like your permission to tape record this interview, so I may accurately document the information you convey. If at any time during the interview you wish to discontinue the use of the recorder or the interview itself, please feel free to let me know. All of your responses are confidential. Your responses will remain confidential and will be used to develop a better understanding of the influences behind collegiate athletes' motivation levels. The purpose of this study is to increase our understanding of why collegiate athletes may decide to end their eligibility before the 4-5 year timeframe.

### **Getting the interview started:**

- I'm very interested in why some college students continue their participation in college sport while other athletes decide to end their participation early. Could you first give me some background on why you decided to play your college sport and the experience you had at the collegiate level?

### **Competency questions:**

- Tell me how confident you felt as a member of your collegiate sport team.
- Did you competence change overtime? And if so, how?
- What kinds of things did your coach or teammates do to make you feel more or less competent?
- How did scholarship affect your collegiate sport experience?
- Did your scholarship make you feel more competent? Was it seen as an indication of your skills?
- On a scale from 1-10, how competent did you feel on your collegiate sport team?

### **Autonomy/control questions:**

- How much did you feel like you had control over your decision to play on this team?
- To what extent did you think your coach wanted athletes on your team to feel a sense of control (e.g., give choices)?
- What kinds of things did your coach do that made you feel like you had some control over your sport experience? (e.g., seek feedback on drills, practice schedule)
- How did others influence your decision to end your collegiate sport career?
- On a scale from 1-10, how much autonomy did you feel like you had on your collegiate sport team?

### **Relatedness questions:**

- Can you tell me how connected you felt to your coaches and teammates?
- What kinds of things happened that made you feel close or not close to them?
- Can you describe things your coaches or teammates did to make you feel more or less connected to them?

- On a scale from 1-10, how related did you feel on your collegiate team?

**Motivation questions:**

- How would you describe your motivation during your collegiate sport experience?
- How did your motivation in your sport increase or decrease throughout your collegiate sport experience?
- What were some things that kept you motivated to participate in your sport throughout college?